

OCD-ARTESIA

Form 3160-5
(April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

RECEIVED

MAR 16 2010

NM OCD-ARTESIA

5 Lease Serial No
NM02884B

6 If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No

8 Well Name and No

Hudson 1 Federal #10H

9 API Well No

30-015-37309

10 Field and Pool, or Exploratory Area

Quahada Ridge SE (Delaware)

11 County or Parish, State

Eddy Co., NM

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

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

2 Name of Operator
BOPCO, L. P.

3a Address
P. O. Box 2760 Midland, TX 79702

3b Phone No (include area code)
432-683-2277

4 Location of Well (Footage, Sec, T, R, M, or Survey Description)

Surface: NWSE, 2300' FSL, 1780' FEL, Sec 1, T23S, R30S, Lat N32.333097, Lon W103.831386
BHL: SWNW, 660' FSL, 330' FWL, Sec 2, T23S, R30E, Lat N32.332281, Long W103.859225

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports 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 site is ready for final inspection.)

BOPCO request approval of the revised horizontal drilling plan. The BHL has been moved from 660' FSL & 2200' FEL, Sec 2, T23S, R30E to 660' FSL & 330' FWL, Sec 2, T23S, R30E, Eddy County, New Mexico. No change in surface location. Well path has been changed, dedicated acreage has been decreased from 280 to 240 acres.

The 7" casing program will be changed from 7735' of 7", 26#, N-80, LT&C to 3185' of 7", 26#, P-110, Ultra Flush Joint through the turn and curve and then 6552' of 7", 26#, P-110, LT&C to surface.

The 4-1/2" casing program will be changed from 6663' of 4-1/2", 11.6#, N-80 Flush Joint to 6986' of 4-1/2", 11.6#, P-110, LT&C with Baker packers for zone isolation. The liner hanger will be at approximately 9587'.

The revised horizontal drilling plan along with new plats are attached.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

BOPCO L.P. Bond # on file: COB000050

14 I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Annette Childers

Title Regulatory Clerk

Signature

Annette Childers

Date

10-15-2009

3-2-2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

Title

Office

Date MAR 12 2010

/s/ Chris Walls

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

MR



BOPCO, L.P.

Location Eddy County, NM
Field Guanahada Ridge, SE (Delaware)
Facility Hugson 1 Fed No 10H

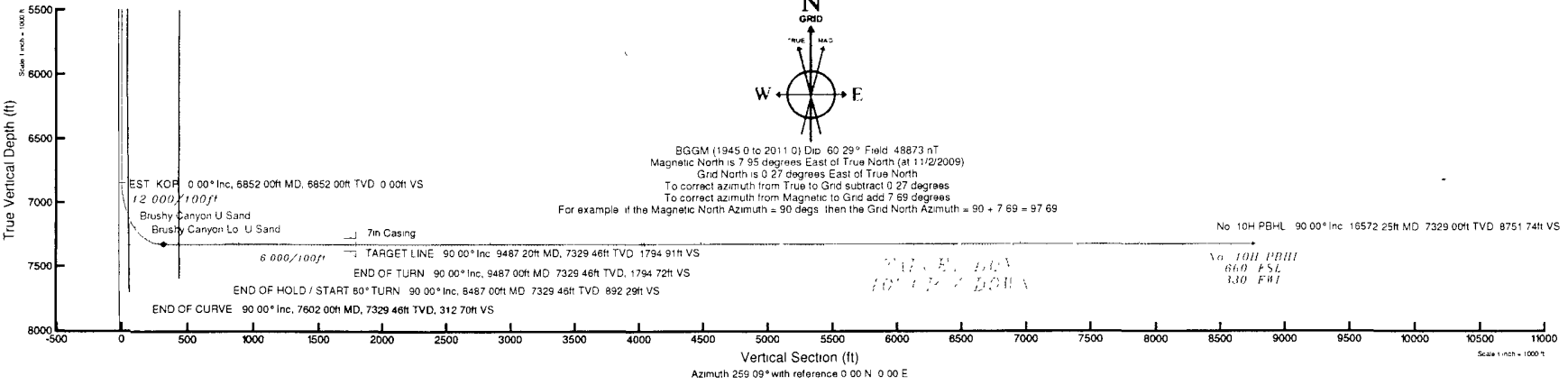
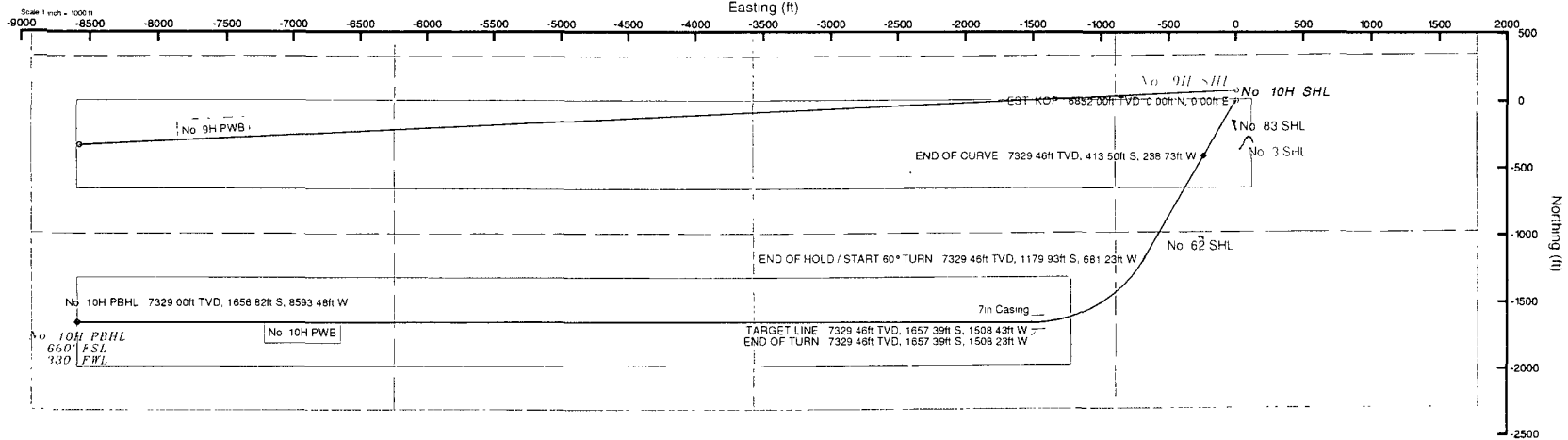
Slot No 10H SHL
Well No 10H
Wellbore No 10H PWB



Plot reference wellpath is Plan #6	
True vertical depths are referenced to Rig on No 10H SHL (RT)	Grid System NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 10H SHL (RT)	North Reference Grid north
Rig on No 10H SHL (RT) to Mean Sea Level: 3309 feet	Scale True distance
Mean Sea Level to Mud line (Facility Hugson 1 Fed No 10H): -3290 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by Victor Hernandez on 2/17/2010

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	OLS (7100ft)	VS (ft)
Tie On	0 00	0 000	210 000	0 00	0 00	0 00	0 00	0 00
EST KOP	6852 00	0 000	210 000	6852 00	0 00	0 00	0 00	0 00
END OF CURVE	7602 00	90 000	210 000	7329 46	-413 50	-238 73	12 00	312 70
END OF HOLD / START 60° TURN	8487 00	90 000	210 000	7329 46	-1179 93	-681 23	0 00	892 29
END OF TURN	9487 00	90 000	270 000	7329 46	-1657 39	1508 23	6 00	1794 72
TARGET LINE	9487 20	90 004	270 005	7329 46	-1657 39	1508 43	3 00	1794 91
No 10H PBHL	16572 25	90 004	270 005	7329 00	1656 82	-8593 48	0 00	8751 74



BGGM (1945 0 to 2011 0) Dip: 60 29° Field: 48873 nT
Magnetic North is 7 95 degrees East of True North (at 11/2/2009)
Grid North is 0 27 degrees East of True North
To correct azimuth from True to Grid subtract 0 27 degrees
To correct azimuth from Magnetic to Grid add 7 69 degrees
For example if the Magnetic North Azimuth = 90 degs then the Grid North Azimuth = 90 + 7 69 = 97 69



Planned Wellpath Report

Plan #6
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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H PWB
Facility	Hudson 1 Fed No. 10H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999937	Report Generated	2/17/2010 at 10:40:36 AM
Convergence at slot	0.27° East	Database/Source file	WA_Midland/No. 10H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W
Facility Reference Pt			696370.91	485276.08	32°19'59.150"N	103°49'52.989"W
Field Reference Pt			696371.30	485350.50	32°19'59.887"N	103°49'52.981"W

WELLPATH DATUM

Calculation method	Minimum curvature / Radius of curvature	Rig on No. 10H SHL (RT) to Facility Vertical Datum	19.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 10H SHL (RT) to Mean Sea Level	3309.00ft
Vertical Reference Pt	Rig on No. 10H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 10H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	259.09°



Planned Wellpath Report

Plan #6

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INTEQ

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Facility	Hudson 1 Fed No. 10H		

WELLPATH DATA (112 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	210.000	0.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	Tie On
197.00†	0.000	210.000	197.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	Rustler
507.00†	0.000	210.000	507.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	B/Rustler
515.00†	0.000	210.000	515.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	Salt
3654.00†	0.000	210.000	3654.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	B/Salt
3892.00†	0.000	210.000	3892.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	D M G / Lamar Lime
3938.00†	0.000	210.000	3938.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	Ramsey
6852.00	0.000	210.000	6852.00	0.00	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W	0.00	EST KOP
6952.00†	12.000	210.000	6951.27	6.83	-9.04	-5.22	696365.69	485267.04	32°19'59.061"N	103°49'53.051"W	12.00	
7052.00†	24.000	210.000	7046.20	27.03	-35.75	-20.64	696350.27	485240.33	32°19'58.797"N	103°49'53.232"W	12.00	
7152.00†	36.000	210.000	7132.65	59.72	-78.97	-45.59	696325.32	485197.11	32°19'58.371"N	103°49'53.525"W	12.00	
7236.11†	46.093	210.000	7196.00	95.85	-126.74	-73.18	696297.74	485149.34	32°19'57.899"N	103°49'53.849"W	12.00	Brushy Canyon U Sand
7252.00†	48.000	210.000	7206.83	103.46	-136.81	-78.99	696291.92	485139.28	32°19'57.800"N	103°49'53.917"W	12.00	
7352.00†	60.000	210.000	7265.50	156.35	-206.75	-119.37	696251.55	485069.35	32°19'57.110"N	103°49'54.392"W	12.00	
7424.91†	68.750	210.000	7297.00	199.36	-263.63	-152.21	696218.71	485012.47	32°19'56.549"N	103°49'54.778"W	12.00	Brushy Canyon Lo. U Sand
7452.00†	72.000	210.000	7306.10	216.07	-285.72	-164.96	696205.96	484990.38	32°19'56.331"N	103°49'54.927"W	12.00	
7552.00†	84.000	210.000	7326.85	280.01	-370.27	-213.78	696157.14	484905.83	32°19'55.496"N	103°49'55.501"W	12.00	
7602.00	90.000	210.000	7329.46	312.70	-413.50	-238.73	696132.19	484862.61	32°19'55.070"N	103°49'55.794"W	12.00	END OF CURVE
7652.00†	90.000	210.000	7329.46	345.44	-456.80	-263.73	696107.19	484819.31	32°19'54.642"N	103°49'56.088"W	0.00	
7752.00†	90.000	210.000	7329.46	410.93	-543.40	-313.73	696057.20	484732.72	32°19'53.788"N	103°49'56.675"W	0.00	
7852.00†	90.000	210.000	7329.46	476.42	-630.00	-363.73	696007.20	484646.12	32°19'52.933"N	103°49'57.263"W	0.00	
7952.00†	90.000	210.000	7329.46	541.91	-716.61	-413.73	695957.20	484559.52	32°19'52.079"N	103°49'57.850"W	0.00	
8052.00†	90.000	210.000	7329.46	607.40	-803.21	-463.73	695907.21	484472.92	32°19'51.224"N	103°49'58.438"W	0.00	
8152.00†	90.000	210.000	7329.46	672.90	-889.81	-513.73	695857.21	484386.33	32°19'50.369"N	103°49'59.025"W	0.00	
8252.00†	90.000	210.000	7329.46	738.39	-976.41	-563.73	695807.21	484299.73	32°19'49.515"N	103°49'59.612"W	0.00	
8352.00†	90.000	210.000	7329.46	803.88	-1063.02	-613.73	695757.22	484213.13	32°19'48.660"N	103°50'00.200"W	0.00	
8452.00†	90.000	210.000	7329.46	869.37	-1149.62	-663.73	695707.22	484126.54	32°19'47.805"N	103°50'00.787"W	0.00	
8487.00	90.000	210.000	7329.46	892.29	-1179.93	-681.23	695689.72	484096.23	32°19'47.506"N	103°50'00.993"W	0.00	END OF HOLD / START 60° TURN
8552.00†	90.000	213.900	7329.46	936.50	-1235.07	-715.62	695655.33	484041.09	32°19'46.962"N	103°50'01.397"W	6.00	
8652.00†	90.000	219.900	7329.46	1010.56	-1315.00	-775.64	695595.32	483961.16	32°19'46.174"N	103°50'02.100"W	6.00	



Planned Wellpath Report

Plan #6

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H PWB
Facility	Hudson 1 Fed No. 10H		

WELLPATH DATA (112 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8752.00†	90.000	225.900	7329.46	1091.23	-1388.22	-843.68	695527.29	483887.95	32°19'45.453"N	103°50'02.897"W	6.00	
8852.00†	90.000	231.900	7329.46	1177.63	-1453.93	-919.00	695451.97	483822.24	32°19'44.806"N	103°50'03.779"W	6.00	
8952.00†	90.000	237.900	7329.46	1268.81	-1511.41	-1000.78	695370.20	483764.77	32°19'44.241"N	103°50'04.735"W	6.00	
9052.00†	90.000	243.900	7329.46	1363.77	-1560.02	-1088.11	695282.86	483716.16	32°19'43.764"N	103°50'05.755"W	6.00	
9152.00†	90.000	249.900	7329.46	1461.47	-1599.23	-1180.05	695190.93	483676.95	32°19'43.380"N	103°50'06.829"W	6.00	
9252.00†	90.000	255.900	7329.46	1560.84	-1628.62	-1275.59	695095.40	483647.56	32°19'43.094"N	103°50'07.944"W	6.00	
9352.00†	90.000	261.900	7329.46	1660.80	-1647.87	-1373.67	694997.32	483628.32	32°19'42.908"N	103°50'09.088"W	6.00	
9452.00†	90.000	267.900	7329.46	1760.24	-1656.75	-1473.23	694897.77	483619.44	32°19'42.825"N	103°50'10.249"W	6.00	
9487.00	90.000	270.000	7329.46	1794.72	-1657.39	-1508.23	694862.78	483618.79	32°19'42.820"N	103°50'10.657"W	6.00	END OF TURN
9487.20	90.004	270.005	7329.46	1794.91	-1657.39	-1508.43	694862.58	483618.79	32°19'42.820"N	103°50'10.659"W	3.00	TARGET LINE
9552.00†	90.004	270.005	7329.46	1858.54	-1657.39	-1573.23	694797.79	483618.80	32°19'42.823"N	103°50'11.414"W	0.00	
9652.00†	90.004	270.005	7329.45	1956.73	-1657.38	-1673.23	694697.79	483618.81	32°19'42.828"N	103°50'12.579"W	0.00	
9752.00†	90.004	270.005	7329.45	2054.92	-1657.37	-1773.23	694597.80	483618.82	32°19'42.832"N	103°50'13.745"W	0.00	
9852.00†	90.004	270.005	7329.44	2153.11	-1657.36	-1873.23	694497.80	483618.82	32°19'42.837"N	103°50'14.910"W	0.00	
9952.00†	90.004	270.005	7329.43	2251.30	-1657.36	-1973.23	694397.81	483618.83	32°19'42.842"N	103°50'16.076"W	0.00	
10052.00†	90.004	270.005	7329.43	2349.49	-1657.35	-2073.23	694297.82	483618.84	32°19'42.846"N	103°50'17.241"W	0.00	
10152.00†	90.004	270.005	7329.42	2447.68	-1657.34	-2173.23	694197.82	483618.85	32°19'42.851"N	103°50'18.406"W	0.00	
10252.00†	90.004	270.005	7329.41	2545.87	-1657.33	-2273.23	694097.83	483618.86	32°19'42.856"N	103°50'19.572"W	0.00	
10352.00†	90.004	270.005	7329.41	2644.06	-1657.32	-2373.23	693997.84	483618.86	32°19'42.860"N	103°50'20.737"W	0.00	
10452.00†	90.004	270.005	7329.40	2742.25	-1657.32	-2473.23	693897.84	483618.87	32°19'42.865"N	103°50'21.903"W	0.00	
10552.00†	90.004	270.005	7329.39	2840.44	-1657.31	-2573.23	693797.85	483618.88	32°19'42.870"N	103°50'23.068"W	0.00	
10652.00†	90.004	270.005	7329.39	2938.63	-1657.30	-2673.23	693697.86	483618.89	32°19'42.874"N	103°50'24.233"W	0.00	
10752.00†	90.004	270.005	7329.38	3036.82	-1657.29	-2773.23	693597.86	483618.90	32°19'42.879"N	103°50'25.399"W	0.00	
10852.00†	90.004	270.005	7329.38	3135.01	-1657.28	-2873.23	693497.87	483618.91	32°19'42.883"N	103°50'26.564"W	0.00	
10952.00†	90.004	270.005	7329.37	3233.20	-1657.27	-2973.23	693397.88	483618.91	32°19'42.888"N	103°50'27.730"W	0.00	
11052.00†	90.004	270.005	7329.36	3331.39	-1657.27	-3073.23	693297.88	483618.92	32°19'42.893"N	103°50'28.895"W	0.00	
11152.00†	90.004	270.005	7329.36	3429.58	-1657.26	-3173.23	693197.89	483618.93	32°19'42.897"N	103°50'30.060"W	0.00	
11252.00†	90.004	270.005	7329.35	3527.77	-1657.25	-3273.23	693097.90	483618.94	32°19'42.902"N	103°50'31.226"W	0.00	
11352.00†	90.004	270.005	7329.34	3625.96	-1657.24	-3373.23	692997.90	483618.95	32°19'42.907"N	103°50'32.391"W	0.00	
11452.00†	90.004	270.005	7329.34	3724.15	-1657.23	-3473.23	692897.91	483618.95	32°19'42.911"N	103°50'33.556"W	0.00	



Planned Wellpath Report

Plan #6

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11552.00†	90.004	270.005	7329.33	3822.34	-1657.23	-3573.23	692797.92	483618.96	32°19'42.916"N	103°50'34.722"W	0.00	
11652.00†	90.004	270.005	7329.32	3920.53	-1657.22	-3673.23	692697.92	483618.97	32°19'42.920"N	103°50'35.887"W	0.00	
11752.00†	90.004	270.005	7329.32	4018.72	-1657.21	-3773.23	692597.93	483618.98	32°19'42.925"N	103°50'37.053"W	0.00	
11852.00†	90.004	270.005	7329.31	4116.92	-1657.20	-3873.23	692497.94	483618.99	32°19'42.930"N	103°50'38.218"W	0.00	
11952.00†	90.004	270.005	7329.30	4215.11	-1657.19	-3973.23	692397.94	483619.00	32°19'42.934"N	103°50'39.383"W	0.00	
12052.00†	90.004	270.005	7329.30	4313.30	-1657.18	-4073.23	692297.95	483619.00	32°19'42.939"N	103°50'40.549"W	0.00	
12152.00†	90.004	270.005	7329.29	4411.49	-1657.18	-4173.23	692197.96	483619.01	32°19'42.943"N	103°50'41.714"W	0.00	
12252.00†	90.004	270.005	7329.28	4509.68	-1657.17	-4273.23	692097.96	483619.02	32°19'42.948"N	103°50'42.880"W	0.00	
12352.00†	90.004	270.005	7329.28	4607.87	-1657.16	-4373.23	691997.97	483619.03	32°19'42.953"N	103°50'44.045"W	0.00	
12452.00†	90.004	270.005	7329.27	4706.06	-1657.15	-4473.23	691897.97	483619.04	32°19'42.957"N	103°50'45.210"W	0.00	
12552.00†	90.004	270.005	7329.26	4804.25	-1657.14	-4573.23	691797.98	483619.04	32°19'42.962"N	103°50'46.376"W	0.00	
12652.00†	90.004	270.005	7329.26	4902.44	-1657.14	-4673.23	691697.99	483619.05	32°19'42.966"N	103°50'47.541"W	0.00	
12752.00†	90.004	270.005	7329.25	5000.63	-1657.13	-4773.23	691597.99	483619.06	32°19'42.971"N	103°50'48.707"W	0.00	
12852.00†	90.004	270.005	7329.24	5098.82	-1657.12	-4873.23	691498.00	483619.07	32°19'42.975"N	103°50'49.872"W	0.00	
12952.00†	90.004	270.005	7329.24	5197.01	-1657.11	-4973.23	691398.01	483619.08	32°19'42.980"N	103°50'51.037"W	0.00	
13052.00†	90.004	270.005	7329.23	5295.20	-1657.10	-5073.23	691298.01	483619.09	32°19'42.985"N	103°50'52.203"W	0.00	
13152.00†	90.004	270.005	7329.22	5393.39	-1657.10	-5173.23	691198.02	483619.09	32°19'42.989"N	103°50'53.368"W	0.00	
13252.00†	90.004	270.005	7329.22	5491.58	-1657.09	-5273.23	691098.03	483619.10	32°19'42.994"N	103°50'54.534"W	0.00	
13352.00†	90.004	270.005	7329.21	5589.77	-1657.08	-5373.23	690998.03	483619.11	32°19'42.998"N	103°50'55.699"W	0.00	
13452.00†	90.004	270.005	7329.20	5687.96	-1657.07	-5473.23	690898.04	483619.12	32°19'43.003"N	103°50'56.864"W	0.00	
13552.00†	90.004	270.005	7329.20	5786.15	-1657.06	-5573.23	690798.05	483619.13	32°19'43.007"N	103°50'58.030"W	0.00	
13652.00†	90.004	270.005	7329.19	5884.34	-1657.05	-5673.23	690698.05	483619.13	32°19'43.012"N	103°50'59.195"W	0.00	
13752.00†	90.004	270.005	7329.19	5982.53	-1657.05	-5773.23	690598.06	483619.14	32°19'43.016"N	103°51'00.360"W	0.00	
13852.00†	90.004	270.005	7329.18	6080.72	-1657.04	-5873.23	690498.07	483619.15	32°19'43.021"N	103°51'01.526"W	0.00	
13952.00†	90.004	270.005	7329.17	6178.91	-1657.03	-5973.23	690398.07	483619.16	32°19'43.026"N	103°51'02.691"W	0.00	
14052.00†	90.004	270.005	7329.17	6277.10	-1657.02	-6073.23	690298.08	483619.17	32°19'43.030"N	103°51'03.857"W	0.00	
14152.00†	90.004	270.005	7329.16	6375.29	-1657.01	-6173.23	690198.09	483619.17	32°19'43.035"N	103°51'05.022"W	0.00	
14252.00†	90.004	270.005	7329.15	6473.48	-1657.01	-6273.23	690098.09	483619.18	32°19'43.039"N	103°51'06.187"W	0.00	
14352.00†	90.004	270.005	7329.15	6571.67	-1657.00	-6373.23	689998.10	483619.19	32°19'43.044"N	103°51'07.353"W	0.00	
14452.00†	90.004	270.005	7329.14	6669.86	-1656.99	-6473.23	689898.11	483619.20	32°19'43.048"N	103°51'08.518"W	0.00	



Planned Wellpath Report

Plan #6

Page 5 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H PWB
Facility	Hudson 1 Fed No. 10H		

WELLPATH DATA (112 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14552.00†	90.004	270.005	7329.13	6768.05	-1656.98	-6573.23	689798.11	483619.21	32°19'43.053"N	103°51'09.684"W	0.00	
14652.00†	90.004	270.005	7329.13	6866.24	-1656.97	-6673.23	689698.12	483619.22	32°19'43.057"N	103°51'10.849"W	0.00	
14752.00†	90.004	270.005	7329.12	6964.43	-1656.96	-6773.23	689598.13	483619.22	32°19'43.062"N	103°51'12.014"W	0.00	
14852.00†	90.004	270.005	7329.11	7062.62	-1656.96	-6873.23	689498.13	483619.23	32°19'43.066"N	103°51'13.180"W	0.00	
14952.00†	90.004	270.005	7329.11	7160.81	-1656.95	-6973.23	689398.14	483619.24	32°19'43.071"N	103°51'14.345"W	0.00	
15052.00†	90.004	270.005	7329.10	7259.00	-1656.94	-7073.23	689298.14	483619.25	32°19'43.075"N	103°51'15.511"W	0.00	
15152.00†	90.004	270.005	7329.09	7357.19	-1656.93	-7173.23	689198.15	483619.26	32°19'43.080"N	103°51'16.676"W	0.00	
15252.00†	90.004	270.005	7329.09	7455.38	-1656.92	-7273.23	689098.16	483619.26	32°19'43.084"N	103°51'17.841"W	0.00	
15352.00†	90.004	270.005	7329.08	7553.57	-1656.92	-7373.23	688998.16	483619.27	32°19'43.089"N	103°51'19.007"W	0.00	
15452.00†	90.004	270.005	7329.07	7651.76	-1656.91	-7473.23	688898.17	483619.28	32°19'43.094"N	103°51'20.172"W	0.00	
15552.00†	90.004	270.005	7329.07	7749.95	-1656.90	-7573.23	688798.18	483619.29	32°19'43.098"N	103°51'21.338"W	0.00	
15652.00†	90.004	270.005	7329.06	7848.14	-1656.89	-7673.23	688698.18	483619.30	32°19'43.102"N	103°51'22.503"W	0.00	
15752.00†	90.004	270.005	7329.05	7946.33	-1656.88	-7773.23	688598.19	483619.31	32°19'43.107"N	103°51'23.668"W	0.00	
15852.00†	90.004	270.005	7329.05	8044.52	-1656.88	-7873.23	688498.20	483619.31	32°19'43.111"N	103°51'24.834"W	0.00	
15952.00†	90.004	270.005	7329.04	8142.71	-1656.87	-7973.23	688398.20	483619.32	32°19'43.116"N	103°51'25.999"W	0.00	
16052.00†	90.004	270.005	7329.03	8240.90	-1656.86	-8073.23	688298.21	483619.33	32°19'43.120"N	103°51'27.165"W	0.00	
16152.00†	90.004	270.005	7329.03	8339.09	-1656.85	-8173.23	688198.22	483619.34	32°19'43.125"N	103°51'28.330"W	0.00	
16252.00†	90.004	270.005	7329.02	8437.28	-1656.84	-8273.23	688098.22	483619.35	32°19'43.129"N	103°51'29.495"W	0.00	
16352.00†	90.004	270.005	7329.01	8535.47	-1656.83	-8373.23	687998.23	483619.35	32°19'43.134"N	103°51'30.661"W	0.00	
16452.00†	90.004	270.005	7329.01	8633.66	-1656.83	-8473.23	687898.24	483619.36	32°19'43.138"N	103°51'31.826"W	0.00	
16552.00†	90.004	270.005	7329.00	8731.85	-1656.82	-8573.23	687798.24	483619.37	32°19'43.143"N	103°51'32.992"W	0.00	
16572.25	90.004	270.005	7329.00†	8751.74	-1656.82	-8593.48	687707.99	483619.37	32°19'43.143"N	103°51'33.228"W	0.00	No 10H PBHL



Planned Wellpath Report

Plan #6

Page 6 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H PWB
Facility	Hudson 1 Fed No. 10H		

HOLE & CASING SECTIONS Ref Wellbore: No. 10H PWB Ref Wellpath: Plan #6

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Intermediate	0.00	3912.00	3912.00	0.00	3912.00	0.00	0.00	0.00	0.00
8.75in Open Hole	3912.00	9496.00	5584.00	3912.00	7329.46	0.00	0.00	-1657.39	-1517.23
7in Casing	0.00	9487.00	9487.00	0.00	7329.46	0.00	0.00	-1657.39	-1508.23
6.125in Open Hole	9487.00	16572.25	7085.25	7329.46	7329.00	-1657.39	-1508.23	-1656.82	-8593.48

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 10H PBHL	16572.25	7329.00	-1656.82	-8593.48	687777.99	483619.37	32°19'43.143"N	103°51'33.228"W	point

SURVEY PROGRAM Ref Wellbore: No. 10H PWB Ref Wellpath: Plan #6

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	16572.25	NaviTrak (Standard)		No. 10H PWB

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
1501 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Artesia, NM 87410

DISTRICT IV
1220 St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37309		Pool Code 50443	Pool Name Quahada Ridge SE (Delaware)
Property Code 306408	Property Name HUDSON "1" FEDERAL		Well Number 10H
OGRIID No. 260737	Operator Name BOPCO, L.P.		Elevation 3290'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	1	23 S	30 E		2300	SOUTH	1780	EAST	EDDY

Bottom Hole Location If Different From Surface

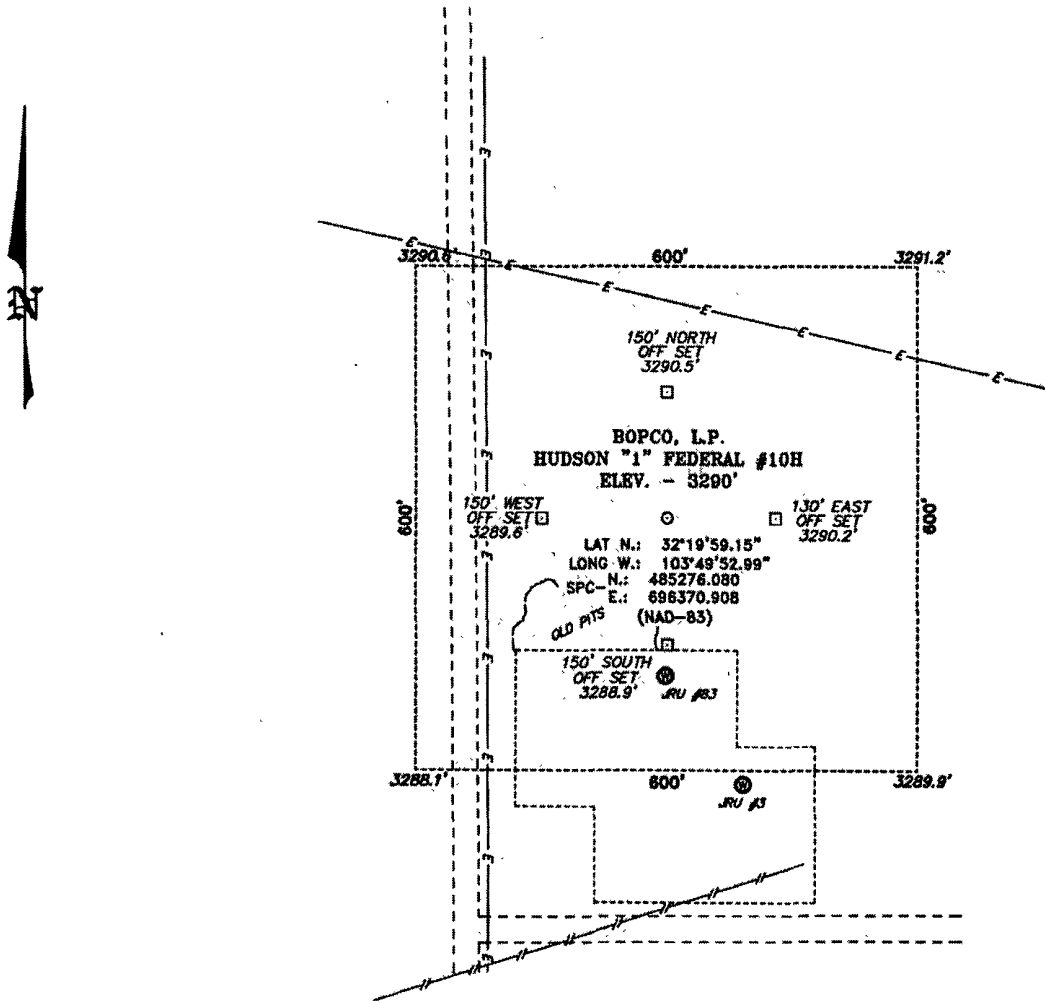
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	2	23 S	30 E		660	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
280	N		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

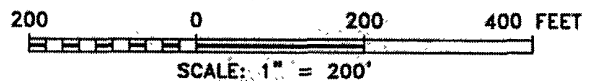
								OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Brian D. Hammit</i> 3/3/10 Signature Date Brian D. Hammit Printed Name	
SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. JUNE 17, 2009 Date Surveyed <i>Gary L. Jones</i> Signature Professional Surveyor W.B. [Signature] Certificate No. Gary L. Jones 7977 RASIN SURVEYS									

**SECTION 1, TOWNSHIP 23 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.**



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF STATE HWY 128 AND WPP
ROAD, GO NORTH ON WPP ROAD 0.5 MILES TO
LEASE ROAD, ON LEASE ROAD GO 0.3 WEST TO
LEASE ROAD, ON LEASE ROAD GO NORTH 0.1 MILES
TO PROPOSED LOCATION.



BOPCO, L.P.

REF: HUDSON #1 FEDERAL #10H / WELL PAD AND TOPO

THE HUDSON #1 FEDERAL #10H LOCATED 2300'

FROM THE SOUTH LINE AND 1780' FROM THE EAST LINE OF

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 30 EAST,

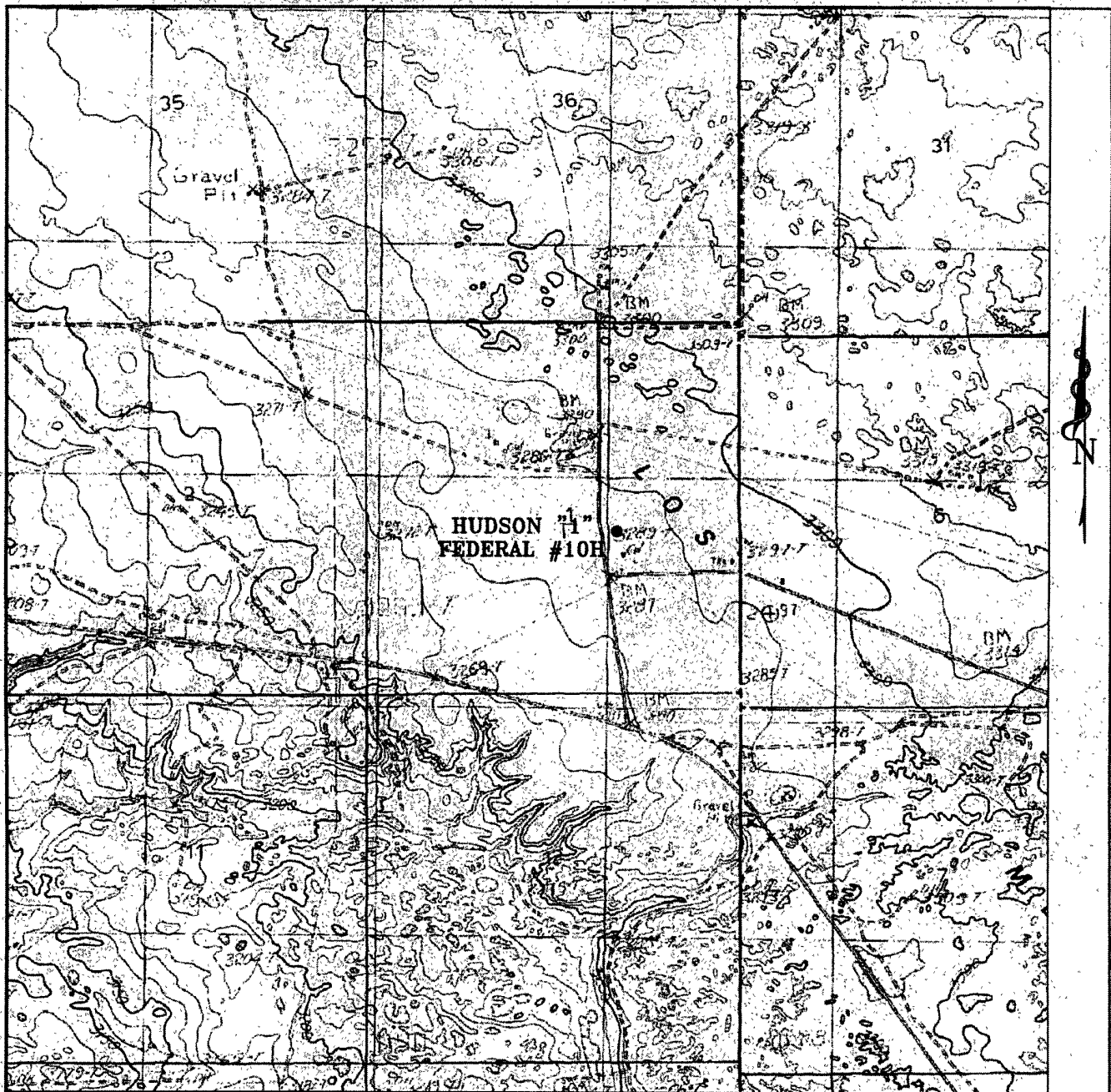
N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 21080 Drawn By: J. SMALL

Date: 03-03-2009 Disk: 21080 JMS

Survey Date: 03-02-2009 Sheet 1 of 1 Sheets



HUDSON "1" FEDERAL #10H
 2300' FSL and 1780' FEL
 Section 1, Township 23 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

basin
surveys

focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

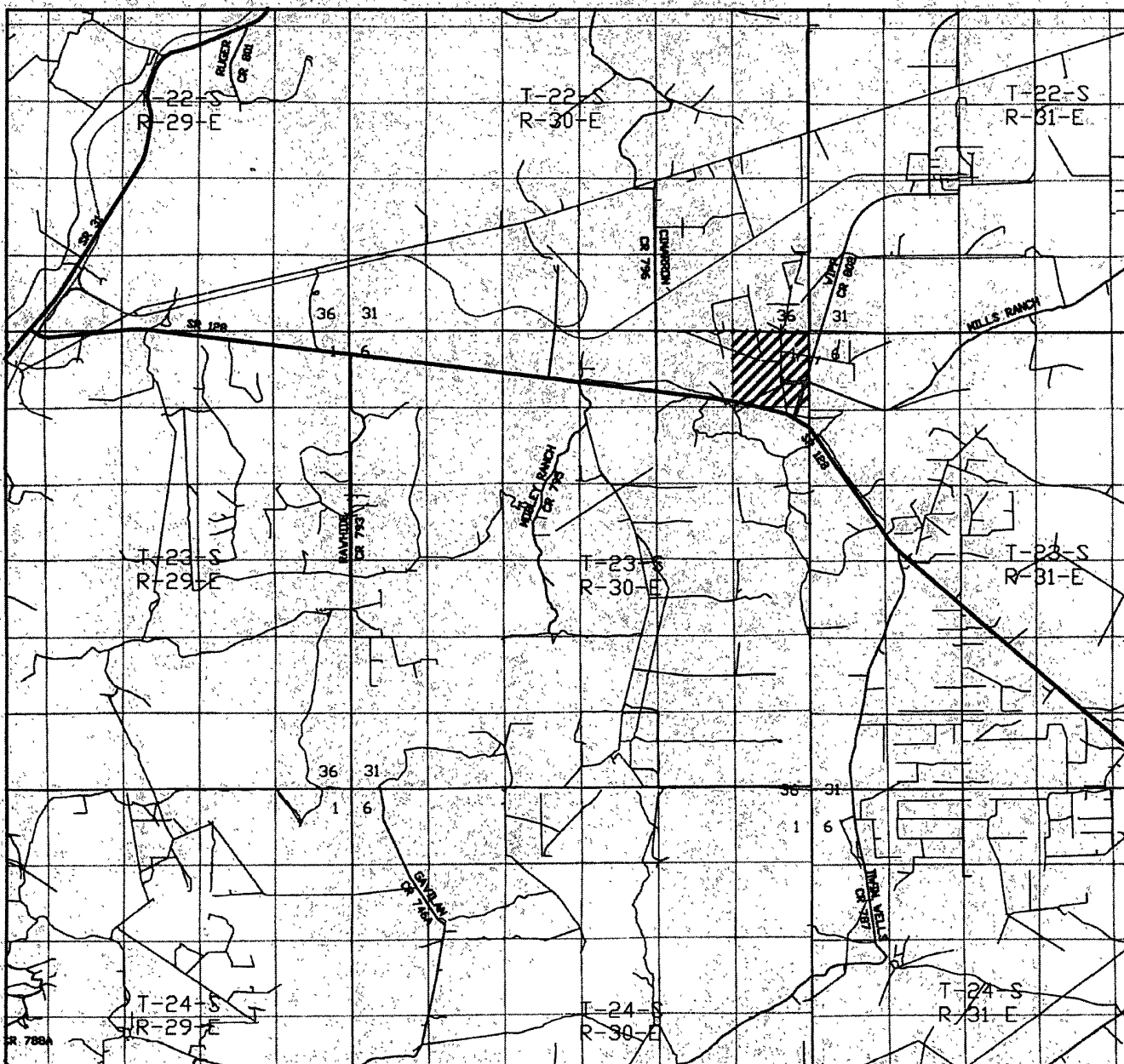
W.O. Number: JMS 21080

Survey Date: 03-02-2009

Scale: 1" = 2000'

Date: 03-03-2009

BOPCO, L.P.



HUDSON "1" FEDERAL #10H
 2300' FSL and 1780' FEL
 Section 1, Township 23 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

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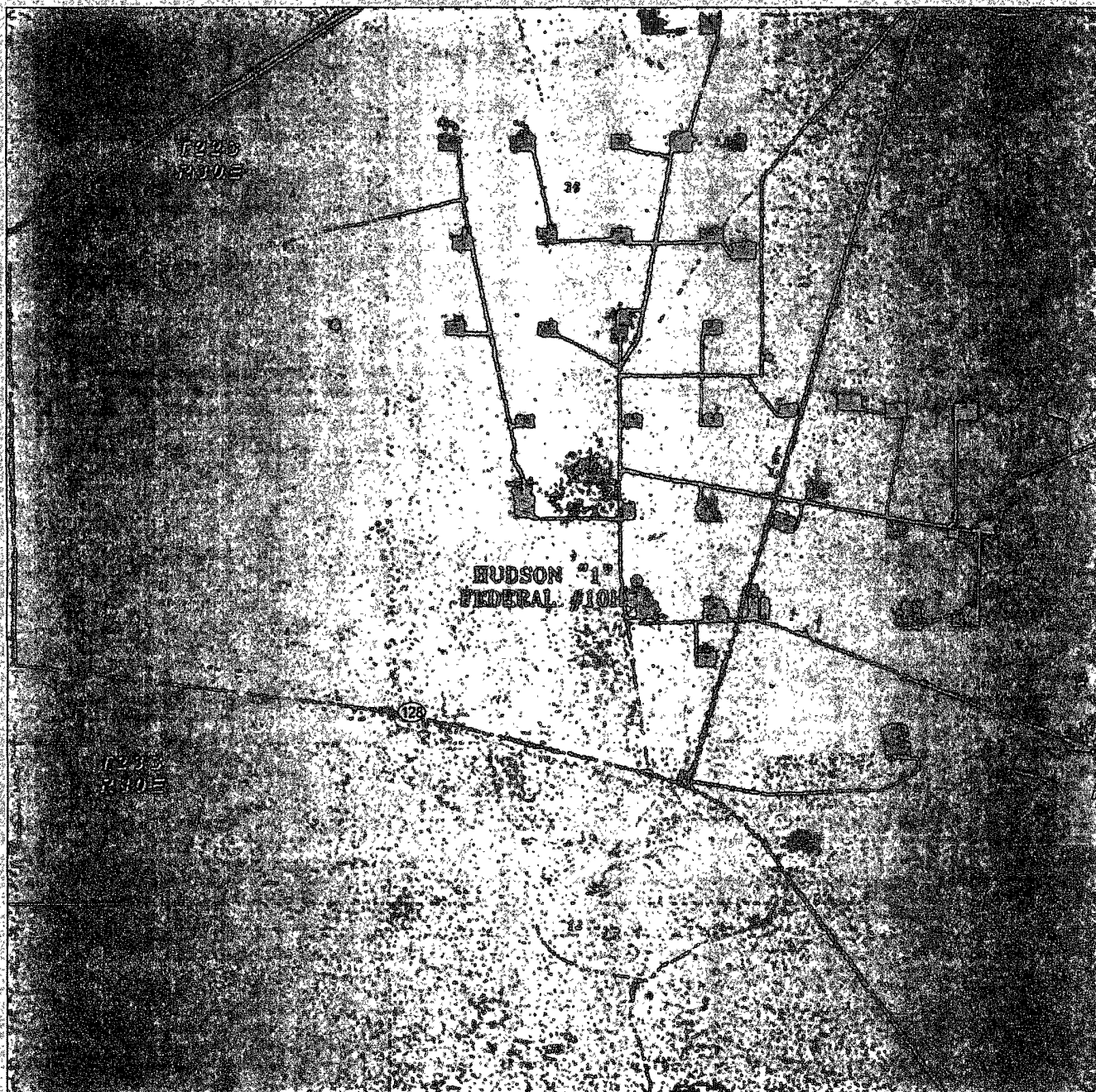
W.O. Number: JMS 21080

Survey Date: 03-02-2009

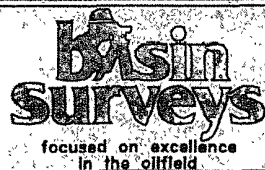
Scale: 1" = 2000'

Date: 03-03-2009

BOPCO, L.P.



HUDSON "1" FEDERAL #10H
 2300' FSL and 1780' FEL
 Section 1, Township 23 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



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 basinsurveys.com

W.O. Number: JMS 21080

Scale: 1" = 2000'

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND

BOPCO, L.P.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1 Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2 Name of Operator **BOPCO, L. P.**3a Address
P. O. Box 2760 Midland, TX 797023b Phone No (include area code)
432-683-2277

4 Location of Well (Footage, Sec, T, R, M, or Survey Description)

**Surface: NWSE, 2300' FSL, 1780' FEL, Sec 1, T23S, R30S, Lat N32.333097, Lon W103 831386
BHL: SWNW, 660' FSL, 330' FWL, Sec 2, T23S, R30E, Lat N32.332281, Long W103 859225**5 Lease Serial No
NM02884B

6 If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No

8 Well Name and No
Hudson 1 Federal #10H9 API Well No
30-015-3730910 Field and Pool, or Exploratory Area
Quahada Ridge SE (Delaware)11 County or Parish, State
Eddy Co., NM

12 CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat 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 site is ready for final inspection.)

BOPCO requests approval for the revised cement program.

See attached

BOPCO L P Bond # on file: COB000050**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**14 I hereby certify that the foregoing is true and correct
Name (Printed/Typed)**Annette Childers**Title **Regulatory Clerk**

Signature

Annette Childers

Date

3-4-2010**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

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.

Title

Office

Date

APPROVED**MAR 12 2010****/s/ Chris Walls****BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE**

Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

BOPCO requests approval for the revised cement program

From <u>INTERVAL</u> <u>SURFACE</u>	<u>Amount Sxs</u>	<u>Ft of Fill</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT³/SX</u>
Lead (100% excess Circ to surface)	175	205	ExtendaCem – CZ + 4% Bentonite + 2% CaCl ₂	9 2	13 5	1 75
Tail (100% excess)	310	300	HalCem-C + 2% CaCl ₂	6 39	14 8	1 33
<u>INTERMEDIATE</u>						
Lead (100% excess Circ to surface)	1100	3412	EconoCem HLC + 5% Salt + 5 lb/sk Gilsonite	9 59	12 6	1 88
Tail (100% excess)	265	500	HalCem-C	6 34	14 8	1 33
<u>2nd INTERMEDIATE</u>						
<u>Stage 1</u>						
Lead (50% excess circ to surface)	175	1930	Halco Tuned Lite	14 4	9 7	3 13
Tail (50% excess)	150	805	HalCem H + 0 9% Halad 9	5 20	15 6	1 18
DV Tool @ 5000'						
<u>Stage 2</u>						
Lead (50% excess)	450	4900	EconoCem-C	14 3	11 9	2 47
Tail (50% excess)	100	100	Class "C" Neat	6 34	14 8	1 33
<u>To</u>						
<u>INTERVAL</u>	<u>Amount Sxs</u>	<u>Ft of Fill</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT³/SX</u>
<u>SURFACE</u>						
Lead (100% excess Circ to surface)	375	315	Class C + D020 + S001 + D130	9 154	13 50	1 74
Tail (100% excess)	200	190	Class C + S001 + D130	6 348	14 80	1 34
<u>INTERMEDIATE</u>						
Lead (50% excess Circ to surface)	655	3062	LiteCrete + D046 +D065 + D042 + D124	7 475	10 20	2 17
Tail (50% excess)	300	850	Class C Neat	6 365	14 80	1 33
<u>2nd INTERMEDIATE</u>						
<u>Stage 1</u>						
Lead (30% excess circ to surface)	272	2862	LiteCrete + D166 + D042 +D046 + D013 + D124	8 937	9 90	2 40
Tail (30% excess)	200	1875	TXI + D167 + D065 + D013 + D042 + D049	7 027	13 00	1 41
DV Tool @ 5000'						
<u>Stage 2</u>						
Lead (30% excess)	425	4320	35/65 Poz + D044 + D020 + D042 + D046 + D132	10 916	12 60	1 98
Tail (30% excess)	100	680	Class C + D013	6 352	14 80	1 33

UNITED STATES **OCD-ARTESIA**
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1 Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5 Lease Serial No NM02884B
2 Name of Operator BOPCO, L. P.		6 If Indian, Allottee or Tribe Name
3a Address P. O. Box 2760 Midland, TX 79702	3b Phone No (include area code) 432-683-2277	7 If Unit or CA/Agreement, Name and/or No
4 Location of Well (Footage, Sec, T, R, M, or Survey Description) Surface: NWSE, 2300' FSL, 1780' FEL, Sec 1, T23S, R30S, Lat N32.333097, Lon W103.831386 BHL: SWNW, 660' FSL, 330' FWL, Sec 2, T23S, R30E, Lat N32 332281, Long W103.859225		8 Well Name and No Hudson 1 Federal #10H
		9 API Well No 30-015-37309
		10 Field and Pool, or Exploratory Area Quahada Ridge SE (Delaware)
		11 County or Parish, State Eddy Co., NM

12 CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☒ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

- 13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat 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 site is ready for final inspection.)

BOPCO L. P. request approval for the revised surface casing program.

The 13 3/8" casing program will be changed from 48#, H-40, ST&C, to 13 3/8", 54.5#, J-55, ST&C.

BOPCO L.P. Bond # on file: COB000050

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14 I hereby certify that the foregoing is true and correct Name (Printed/Typed) Annette Childers		Title Regulatory Clerk
Signature <i>Annette Childers</i>		Date 3-1-2010
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by _____ 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.	Title _____ Office _____	Date MAR 12 2010 /s/ Chris Walls BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE

Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

B5H

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NM02884B
WELL NAME & NO.:	HUDSON 1 FEDERAL #10H
SURFACE HOLE FOOTAGE:	2300' FSL & 1780' FEL SEC 1, T23S, R30E
BOTTOM HOLE FOOTAGE:	660' FSL & 2200' FEL SEC 2, T23S, R30E
LOCATION:	Section 1, T. 23 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Due to recent H2S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

R-111-P Potash / WIPP

High cave/karst.

Possible lost circulation in the Delaware and Bone Spring formations.

1. **The 13-3/8 inch surface casing shall be set at approximately 505 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If the salt is encountered at a shallower depth, the casing is to be set a minimum of 25 feet above the salt.**
 - a. **If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.**
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
Casing to be set a minimum of 100' to 600' below the base of salt.
 - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash and cave/karst concerns.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

- 3. The minimum required fill of cement behind the 7 inch production casing is:
 - a. First stage to DV tool, cement shall:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.
 - b. Second stage above DV tool, cement shall:
 - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required as the excess calculates to be 24%.**
- 4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
 - ☒ No cement required. Operator is using a packer liner system.
- 5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi. Operator is using a 5M system, but testing as a 2M.**
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **3000 (3M) psi. Operator is using a 5M system, but testing as a 3M.**
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. Casing cut-off and BOP installation will not be initiated until the cement has had a minimum of 8 hours setup time for a water basin. The casing shall remain stationary and under pressure for at least eight hours after the operator places the cement. In the potash area, the minimum time is 12 hours and the casing shall remain stationary and under pressure during this time period. Casing shall be under pressure if the operator uses some acceptable means of holding pressure or if the operator employs one or more float valves to hold the cement in place. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
 - b. The tests shall be done by an independent service company utilizing a test plug.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. WIPP Requirements

The proposed well is located more than 330' from the WIPP Land Withdrawal Area boundary. As a result, BOPCO, L.P. is requested, but not required to submit daily logs and deviation survey information to the Department of Energy per requirements of the Joint Powers Agreement. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Any future entry into the well for purposes of completing additional drilling will require supplemental information.

BOPCO, L.P. can email the required information to Ms. Susan McCauslin at susan.mccauslin@wipp.ws or fax to her attention at 575-234-6003.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

CRW 030810