OCD Artesia

ATS-12-424

R-111-POTASH

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
BHLC065914, (see box six)

6 If Indian, Allotee or Tribe Name
Lease information is on pg 1 of 8pt.

1a. Type of work ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No
Big Eddy Unit 68294X

1b. Type of Well. ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8 Lease Name and Well No.
Big Eddy Unit DI5 4H

2. Name of Operator
BOPCO, L. P.

9 API Well No.
30-015-40397

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

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

10 Field and Pool, or Exploratory
Parallel (Delaware)

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*

At surface **SWNE, UL G, 1980' FNL, 1848' FEL, Lat:N32.545969,Long:W103.853942**

At proposed prod. zone **2050' FNL,330' FEL,Sec 25,T20S-R31E,Lat:N32.545814,Lng:W103.814761**

11. Sec., T. R M or Blk and Survey or Area
Sec 27, T20S-R31E

14 Distance in miles and direction from nearest town or post office*
25 miles to the NE

12 County or Parish
Eddy

13 State
NM

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any)	16 No. of acres in lease	17 Spacing Unit dedicated to this well
1,848' / 19,180' (BEU line)	**1,520**	**400**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19 Proposed Depth	20. BLM/BIA Bond No. on file
167'	**18,927' MD \ 7,650' TVD**	**COB 000050**
21 Elevations (Show whether DF, KDB, RT, GL, etc)	22 Approximate date work will start*	23 Estimated duration
3,523' GL	**05/13/2012**	**35 Days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form

1. Well plat certified by a registered surveyor
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Jeremy Braden	**Jeremy Braden**	2-17-12

Title
Engineering Assistant

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Jesse J. Juen	**/s/ Jesse J. Juen**	**JUN - 4 2012**

Title	Office
STATE DIRECTOR	**NM STATE OFFICE**

Application approval 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.
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U.S.C Section 1001 and Title 43 U.S.C 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)

CAPITAN CONTROLLED WATER BASIN

RECEIVED
JUN 13 2012
NMOCD ARTESIA

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-40397	49600	Parallel (Delaware)

Property Code	Property Name	Well Number
305860	BIG EDDY UNIT DI 5	4H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3523'

Surface Location

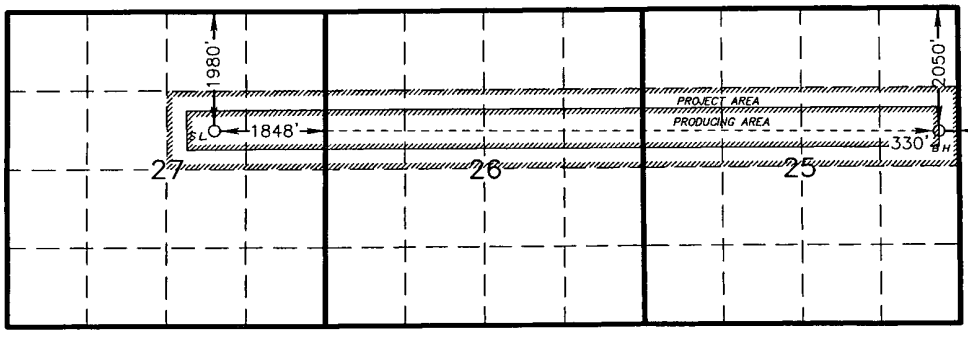
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	27	20 S	31 E		1980	NORTH	1848	EAST	EDDY

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
H	25	20 S	31 E		2050	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
400			

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



SURFACE LOCATION
Lat - N 32°32'45.49"
Long - W 103°51'14.19"
NMSPCE- N 562668.476
E 647722.356
(NAD-27)

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°32'44.93"
Long - W 103°48'53.14"
NMSPCE- N 562667.849
E 659795.863
(NAD-27)

SCALE 1" = 3000'

BOTTOM HOLE LOCATION IS CALCULATED FROM PLATTED GLO DISTANCES
NO SURVEY WAS PERFORMED FOR BOTTOM HOLE

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 or has a right to drill this well at this 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.

Jeremy Braden 2-16-12
Signature Date

Jeremy Braden
Printed Name

jdbraden@basspet.com
Email Address

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 supervison, and that the same is true and correct to the best of my belief.

JANUARY 19, 2012
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

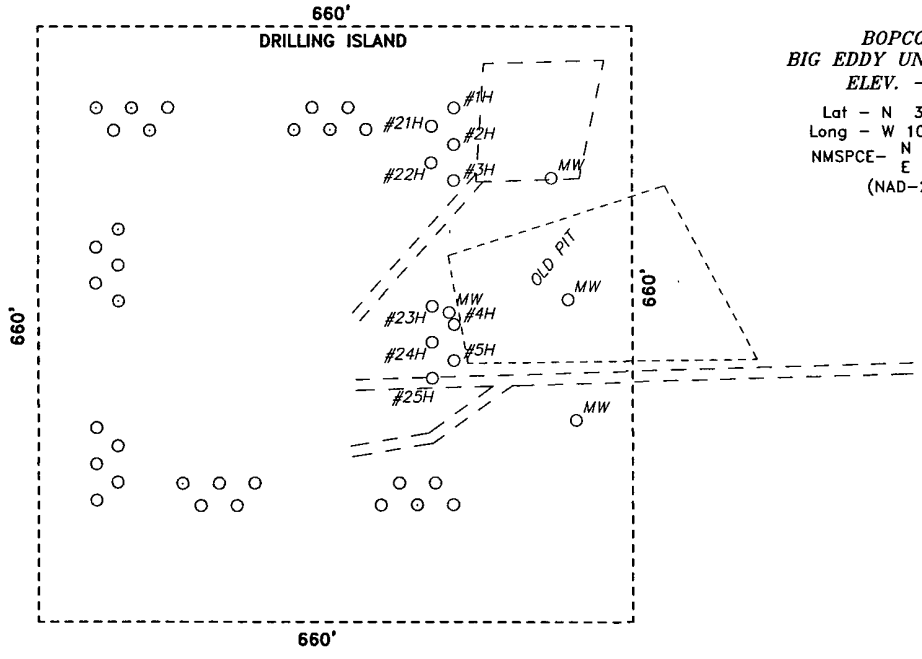
NM PROFESSIONAL 26030

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 26030

SECTION 27, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M.,

EDDY COUNTY, WELL PAD LAYOUT NEW MEXICO.



BOPCO, L.P.
BIG EDDY UNIT DI 5 #4H
ELEV. - 3523'

Lat - N 32°32'45.49"
Long - W 103°51'14.19"
NMSPCE- N 562668.476
E 647722.356
(NAD-27)

200 0 200 400 FEET
SCALE: 1" = 200'

Directions to Location:

FROM MILE MAKER 61 OF HOBBS HWY, GO WEST 0.5 MILES TO LEASE ROAD, ON LEASE ROAD, GO NORTH 1 3 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0 3 MILES TO PROPOSED DRILLING ISLAND WITH PROPOSED WELLS.

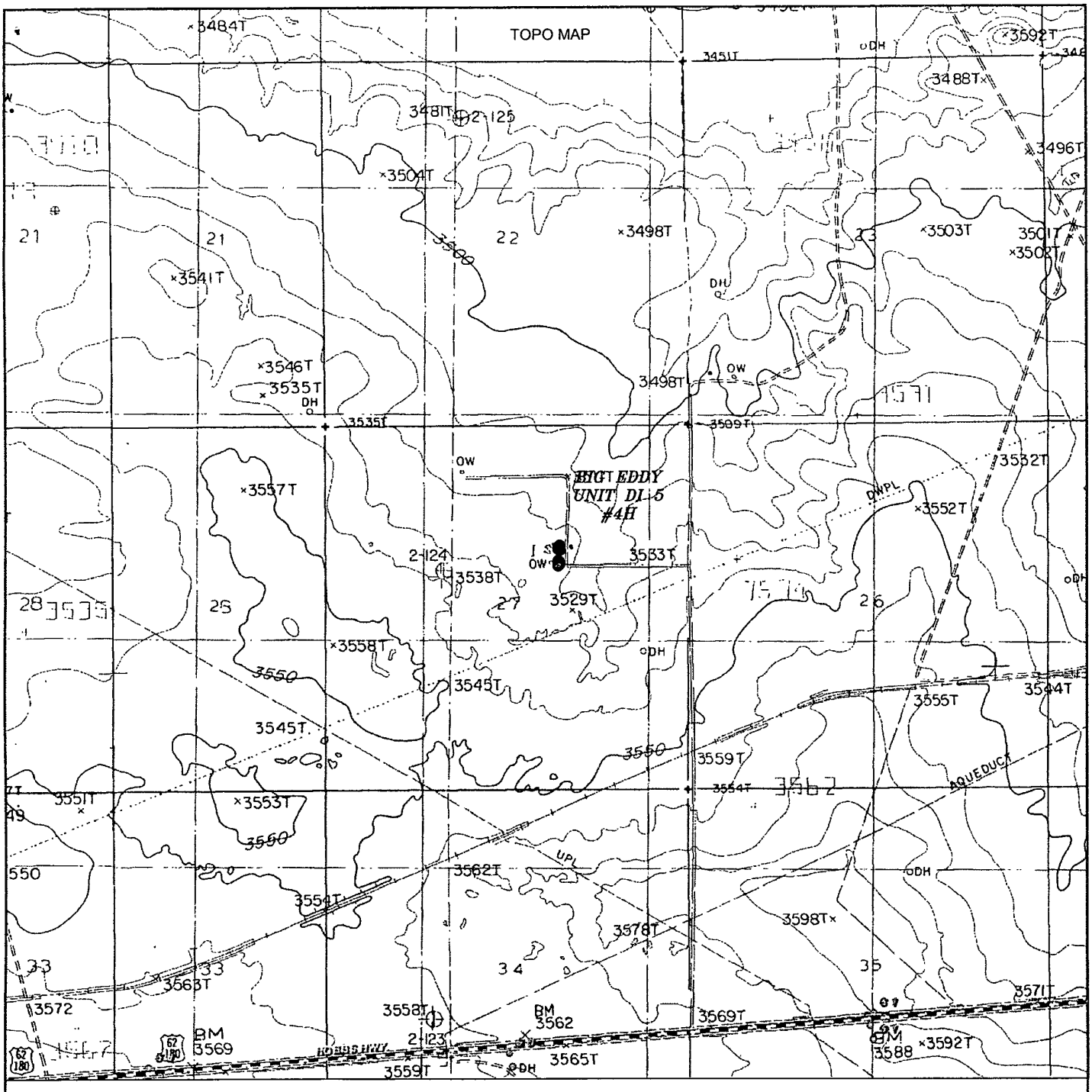
BOPCO, L.P.

REF BIG EDDY UNIT DI 5 #4H / WELL PAD TOPO

THE BIG EDDY UNIT DI 5 #4H LOCATED 1980' FROM THE NORTH LINE AND 1848' FROM THE EAST LINE OF SECTION 27, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number 26030	Drawn By: J. GOAD		
Date: 1-19-2012	Disk: JG - 26030WELL	Survey Date: 1-17-2012	Sheet 1 of 6 Sheets



BIG EDDY UNIT DI 5 #4H
Located 1980' FNL and 1848' FEL
Section 27, Township 20 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

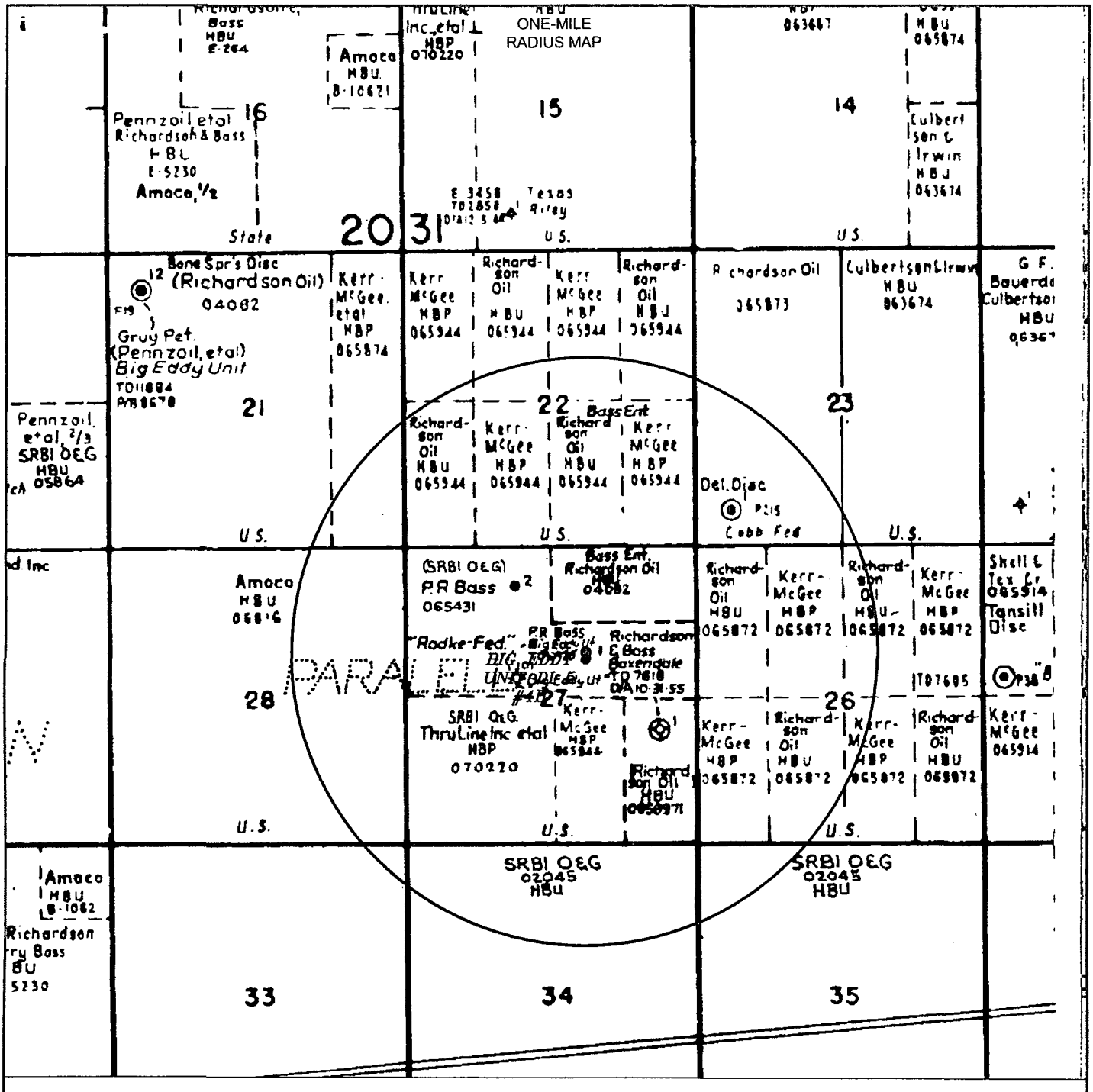
basin surveys
focused on excellence in the oilfield

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: JG – 26030
Survey Date: 1-17-2012
Scale: 1" = 2000'
Date: 1-20-2012

BOPCO, L.P.

Sheet 2 of 6 Sheets



BIG EDDY UNIT DI 5 #4H
Located 1980' FNL and 1848' FEL
Section 27, Township 20 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

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Hobbs, New Mexico 88241
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(575) 392-2206 - Fax
basinsurveys.com

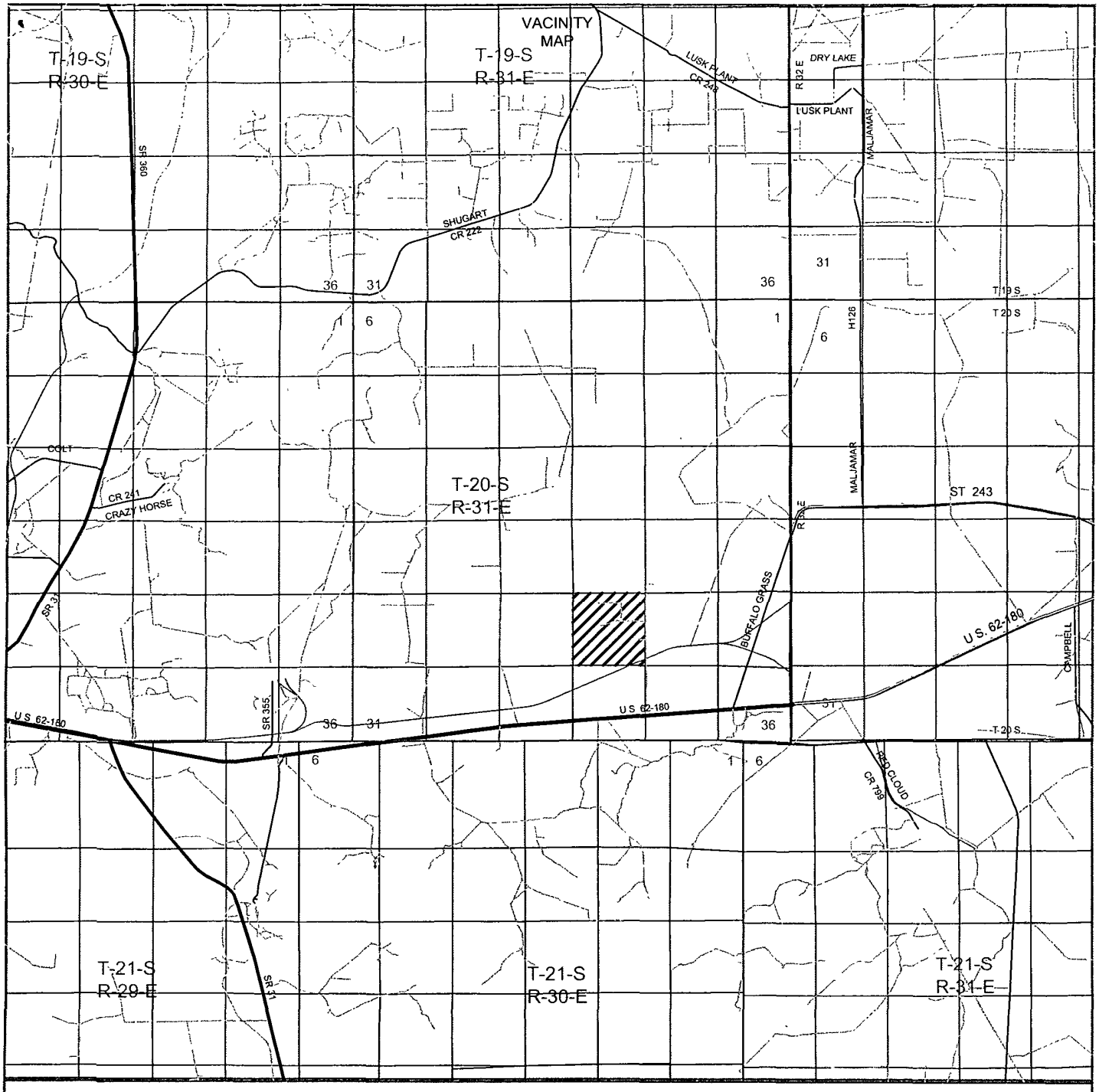
W.O. Number: JG - 26030

Scale: None

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

N

BOPCO, L.P.



BIG EDDY UNIT DI 5 #4H
Located 1980' FNL and 1848' FEL
Section 27, Township 20 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
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Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

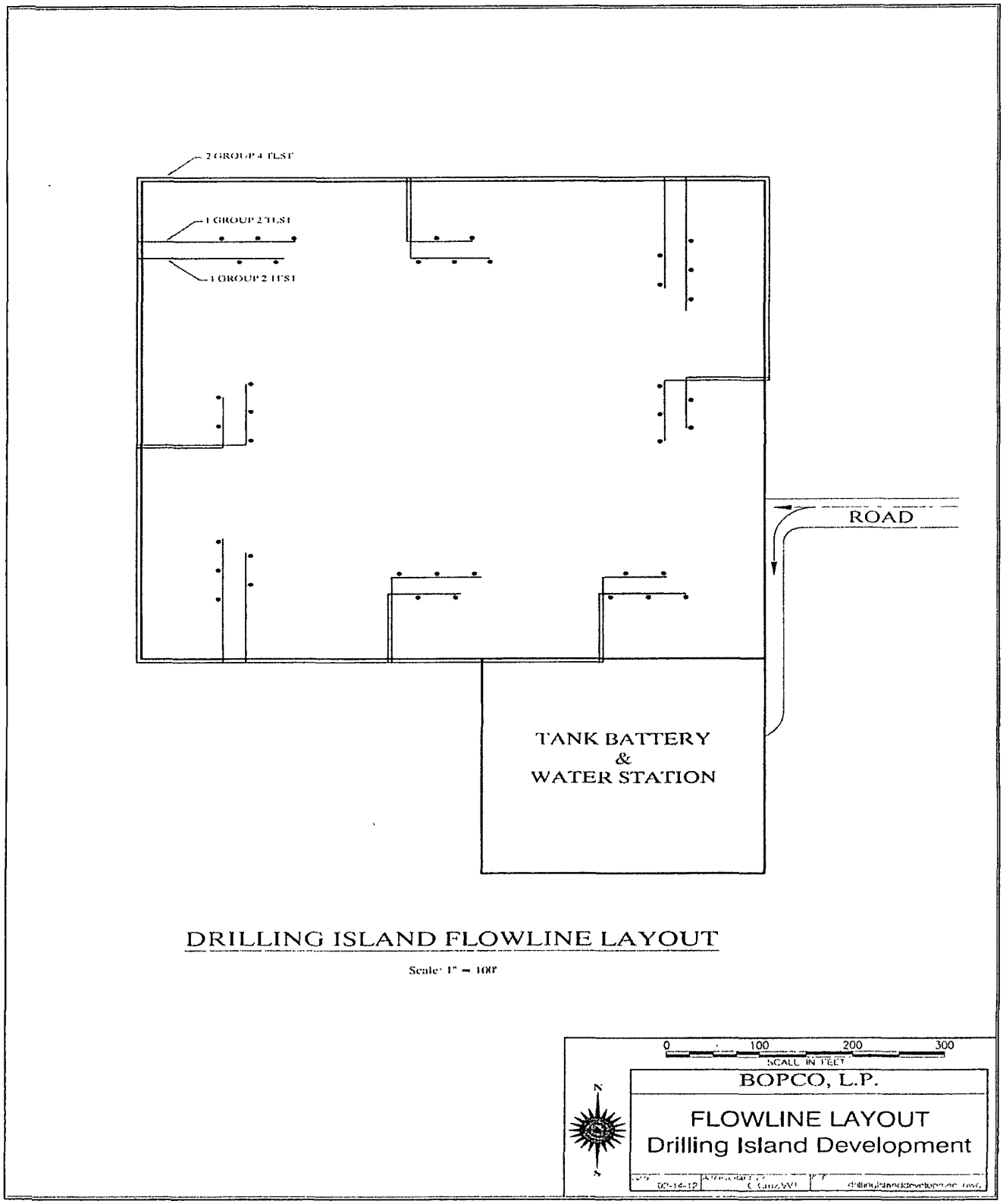
W.O. Number:	JG - 26030
Survey Date:	1-17-2012
Scale:	1" = 2 Miles
Date:	1-20-2012

N

BOPCO, L.P.

Sheet 3 of 6 Sheets

Big Eddy Unit DI5 Flow-line Layout Exhibit #4

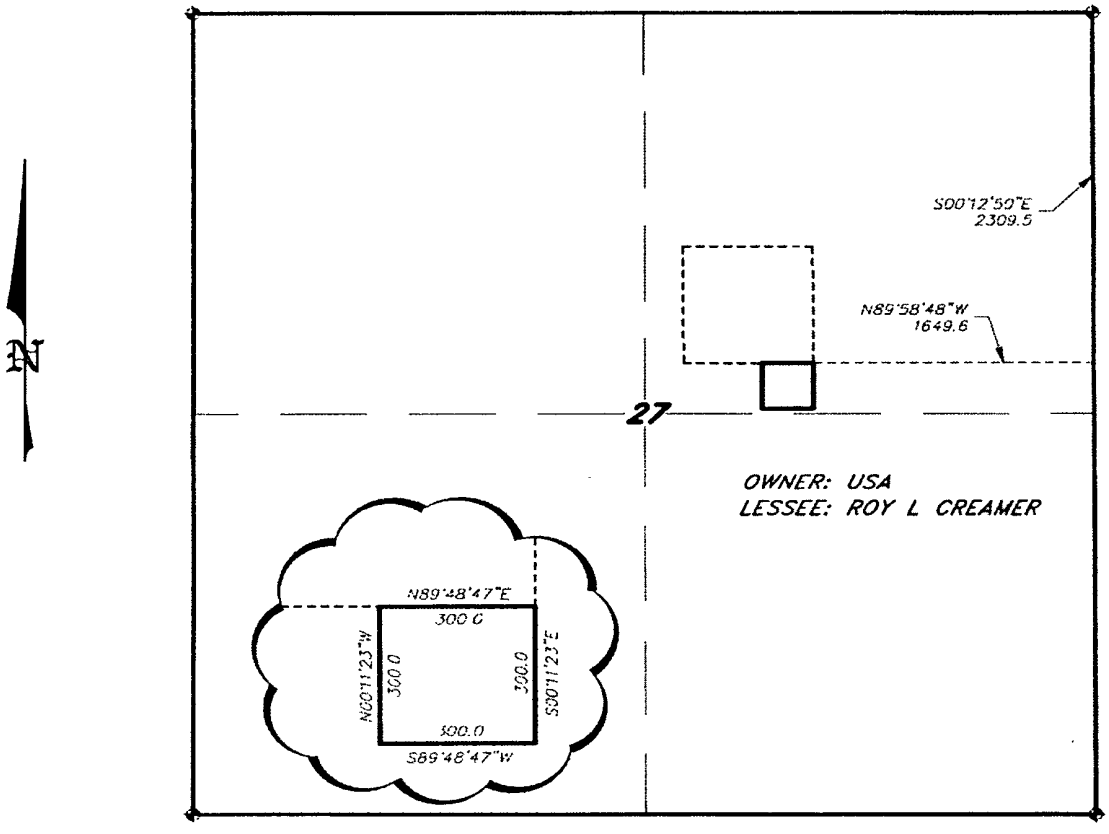


DRILLING ISLAND FLOWLINE LAYOUT

Scale: 1" = 100'

BEU DI5 Facilities Pad Exhibit 5

SECTION 27, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN SECTION 27, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS

BEGINNING AT A POINT WHICH LIES S.00°12'50"E, 2309.5 FEET AND N.89°58'48"W, 1649.6 FEET FROM THE NORTHEAST CORNER OF SAID SECTION 27; THENCE S.00°11'23"E, 300.0 FEET; THENCE S.89°48'47"W, 300.0 FEET; THENCE N.00°11'23"W, 300.0 FEET; THENCE N.89°48'47"E, 300.0 FEET TO THE POINT OF BEGINNING. SAID TRACT OF LAND CONTAINING 2.07 ACRES, MORE OR LESS

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES — No. 7977 — TEXAS P.L.S. No. 5074

1000 0 1000 2000 FEET

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

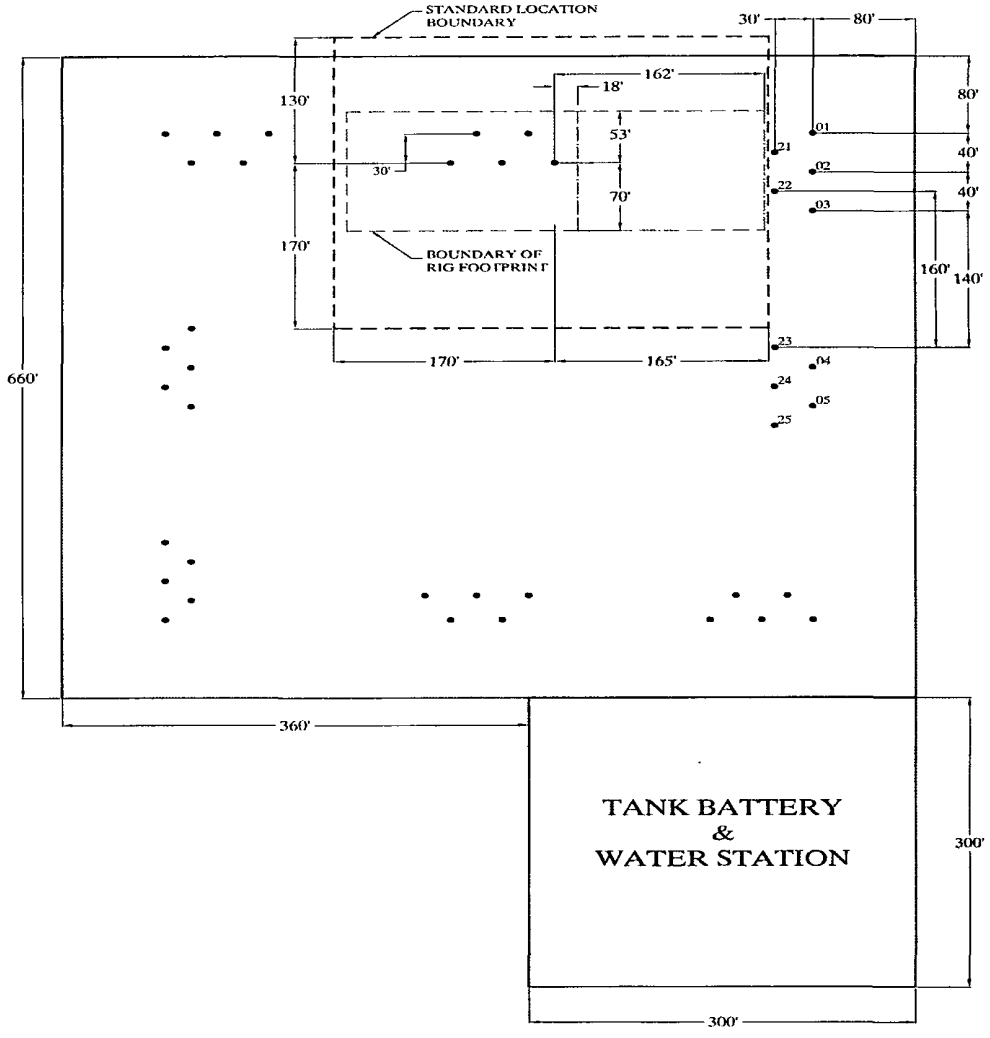
BOPCO, L.P.

REF: PROPOSED FACILITIES PAD

A TRACT OF LAND LOCATED ON USA LAND IN SECTION 27, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number 25814	Drawn By: J. M. SMALL		
Date: 12-27-2011	Disk JMS 25814	Survey Date: 12-08-2011	Sheet 1 of 1 Sheets

BEU DI5 Facilities Pad Exhibit 5



DRILLING ISLAND LAYOUT

Scale: 1" = 100'

0 100 200 300
SCALE IN FEET

N
S

BOPCO, L.P.

BOWLING PIN 40' x 30'
Drilling Island Development

DATE	INTERCHANGE BY	FILE
02-14-12	C.Cruz/WT	drillingislanddevelopment.dwg

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 849' and cement circulated to surface.

A Capitan Reef production string will be set at an approximate depth of 3,575' and cement circulated to surface.

7" casing will be set at approximately 7,889' MD, 7,457' TVD (thru curve) and cemented in two stages with DV Tool set at approximately 5,000'. Cement will be circulated to surface.

Drilling procedure, BOP diagram, and anticipated tops are attached.

This well is located inside the the R111 Potash area and Secretary's Potash area.

The surface location is nonstandard and located inside the Big Eddy Unit.

The bottom hole location is standard and located inside the Big Eddy Unit.

Surface Lease Numbers – NMLC 065431, NMLC 065872

Bottom Hole Lease Numbers – NMLC 065914

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Main Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide).

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Big Eddy Unit DI 5 4H
LEGAL DESCRIPTION - SURFACE: 1,980' FNL, 1,848' FEL, Section 27, T20S, R31E, Eddy County, NM.
BHL: 2,050' FNL, 330' FEL, Section 25, T20S, R31E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS (See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3,553' (estimated)
GL 3,523'

FORMATION	ESTIMATED TOP FROM KB TVD	MD	ESTIMATED SUB-SEA TOP	BEARING
T/Fresh Water	90'	90'	+ 3,463'	Fresh Water
T/Rustler	677'	677'	+ 2,876'	Barren
T/Salt	859'	859'	+ 2,694'	Barren
T/Tansil	2,804'	2,804'	+ 749'	Barren
T/Reef	2,904'	2,904'	+ 649'	Water
T/DMG	3,247'	3,249'	+ 306'	Oil/Gas
T/Del Sd	3,841'	3,845'	- 288'	Oil/Gas
T\Brushy Canyon	6,457'	6,471'	- 2,604'	Oil/Gas
KOP	6,933'	6,949'	- 3,380'	Oil/Gas
T\Cobb Pay	6,972'	6,988'	- 3,419'	Oil/Gas
T/LBC "8A"	7,277'	7,333'	- 3,724'	Oil/Gas
EOC	7,456'	7,789'	- 3,903'	Oil/Gas
Target #1	7,456'	7,789'	- 3,903'	Oil/Gas
TD Horizontal Hole	7,650'	18,927'	- 4,097'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	Hole Size	PURPOSE	CONDITION
30"	0'- 60'	36"	Conductor	Contractor Discretion
20" 94#, J-55, BTC	0'- 849'	26"	Surface	New
13-3/8", 61#, J-55, BTC, or	0' - 2,500'	17-1/2"	Intermediate	New
13-3/8", 68#, J-55, BTC**	2,500' – 2,700'	17-1/2"	Intermediate	New
9-5/8", 40#, N-80, 8rd, LT&C or 9-5/8" 40#, J-55, 8rd, LT&C*	0' - 3,575'	12-1/4"	Intermediate	New
7", 26#, N-80, Buttress or 8rd LTC*	0' - 7,889'	8-3/4"	Production	New
Completion System				
4-1/2", 11.6#, HCP-110 8rd. LT&C*	7,839' – 18,927'	6-1/8"	Completion System	New
4-1/2", 11.6#, N-80, 8rd, LT&C*	7,839' – 18,927'	6-1/8"	Completion System	New

*** Depending on availability**

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
20", 94#, J-55, BT&C	96.06	1.28	2.03
13-3/8", 61#, J-55, BT&C**	7.47	1.16	2.22
13-3/8", 68#, J-55, BT&C**	6.52	1.21	2.17
9-5/8", 40#, N-80, 8rd, LT&C*	6.54	1.90	3.15
9-5/8", 40#, J-55, 8rd, LT&C*	5.59	1.56	2.17
7", 26#, N-80, Buttress*	3.61	1.34	1.74
7", 26#, N-80, 8rd, LTC*	3.10	1.30	1.74
Completion System			
4-1/2", 11.6#, HCP-110 8rd. LT&C*	3.52	2.08	2.50
4-1/2", 11.6#, N-80, 8rd, LT&C*	2.91	1.45	1.82

Depending on availability.

****13-3/8", 61#, J-55, BT&C casing will not be run deeper than 2,500'. The 13-3/8", 68#, BT&C will be run from 2,500' to interval TD.**

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (20")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING - (13-3/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10.2 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.53 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient

PROTECTIVE CASING - (9-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1 125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

Production CASING - (7")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

Completion System - (4-1/2")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM 1 & 2)

The BOPE when rigged up on the 20" surface casing head (17-1/2" hole) will consist of 20" hydril and diverter system per Diagram B (2,000 psi WP). The hydril when installed on surface casing will be tested to 1,000 psi.

The BOPE when rigged up on the 13-3/8" surface casing head (12-1/4" open hole) will consist of 13-5/8" X 5,000 psi dual ram BOP's with mud cross, choke manifold, chokes, and hydril per Diagram 1 (5,000 psi WP). The pipe and blind rams, choke, kill lines, kelly cocks, inside BOP, etc. when installed on the surface casing head will be hydro-tested to 250-300 psig and 2000 psig by independent tester. The hydril when installed on surface casing head will be tested to 1000 psi.

The BOPE when rigged up on the 9-5/8" intermediate casing spool (8-3/4" open hole) will consist of 13-5/8" x 5,000 psi annular, 13-5/8" x 5,000 psi pipe & blind rams with mud cross, choke manifold and chokes as in Diagram 1. The pipe and blind rams, choke, kill lines, kelly cocks inside BOP, etc. will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (250-300 psig) test will be required. Hydril will be tested to 1500 psig.

The BOPE when rigged up on the 7" intermediate casing spool (6-1/8" open hole) will consist of 13-5/8" x 5,000 psi annular, 13-5/8" x 5,000 psi pipe & blind rams with mud cross choke manifold and chokes as in Diagram 1. The pipe and blind rams, choke, kelly lines, kelly cocks inside BOP, etc. will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (250-300 psig) test will be required. Hydril will be tested to 1500 psig.

Flex Hose Required - See COA

These tests will be performed:

a) Upon installation
b) After any component changes
c) Thirty days after a previous test
d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

Please refer to diagram 2 for choke manifold and closed loop system layout.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 849'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0
849' - 2,700'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
2,700' - 3,575'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
3,575' – 18,927'	FW/Gel/Starch	8.7 – 9.0	28-36	NC	NC	<100	9.5 – 10.0

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING See COA

Run #1: GR with MWD during drilling of build and horizontal portions of 8-3/4" and 6-1/8" hole.

Run #2: Shuttle log w/GR, PE, Density, Neutron, Resistivity in lateral leg open hole.

Mud Logger: Rigged up at 100'.

C) CONVENTIONAL CORING

None anticipated

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE: (Fresh Water String)						
Lead: 0' – 549'	960	549	Class C + 2% CACL + 4% Bentonite + 0.25LB/SK Cello Flake + 3 lb/sk LCM-1	8.69	13.50	1.75
Tail: 549' – 849'	740	300	Class C + 2%CACL + 0.25 LB/SK CF	6.35	14.80	1.35
1st INTERMEDIATE: (Salt String)						
Lead: 0' – 2,200'	1500	2200	EconoCem HLC 5% CaCl + 5 #/sk Gilsonite	9.32	12.90	1.85
Tail: 2,200' – 2,700'	600	500	HalCem C	6.34	14.80	1.33
2nd INTERMEDIATE : (Reef String)						
Lead : 0 - 3,075'	700	3075	EconoCem HLC 5% CaCl + 5 #/sk Gilsonite	9.32	12.90	1.85
Tail : 3,075' – 3,575'	280	500	HalCem C	6.34	14.80	1.33
7" String						
Stage 1: Lead: 5,000' –6,833'	160	1833	Tuned Light + 0.75% CFR-3 + 1.5#/sk CaCl	12.41	10.20	2.76
Tail: 6,833' – 7,889'	170	1056	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.65
DV Tool @ 5,000'						
Stage 2. Lead: 0' – 4,500'	400	4500	EconoCem HLC + 1% Econolite + 5% CaCl + 5#/sk Gilsonite	10.71	12.60	2.04
Tail: 4,500' – 5,000'	100	500	HalCem C	6.34	14.80	1.33

Cement excesses will be as follows:

Surface – 100% excess with cement circulated to surface.

1st and 2nd Intermediate – 50% excess above fluid caliper with cement circulated to surface.

Production – 50% above gauge hole or 35% above electric log caliper with cement circulated 500' up into the 9-5/8" 1st intermediate casing in **areas outside the SOPA**. Cement will be circulated to surface on areas inside the SOPA.

Cement volumes will be adjusted proportionately for depth changes of the multi stage tool.

E) DIRECTIONAL DRILLING

BOPCO, L.P. plans to drill out the 9-5/8" intermediate casing with a 8-3/4" bit to a TVD of approximately 6,949' at which point a directional hole will be kicked off and drilled at an azimuth of 90 degrees, building angle at 10.90 deg/100' to 90 degrees at a TVD of 7456' (MD 7,789'). This angle and azimuth will be maintained for 100' to a measured depth of 7,889' (7,457' TVD). At this depth 7", 26#, N-80, Buttress, or 8rd LTC casing will be installed and cemented in two stages (DV Tool @ approximately 5000') with cement circulated to surface. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 90.003 degrees, inclination of 89.002 degrees to a measured depth of 18,927', (TVD 7,650'). At this depth a 4-1/2" Completion System with packers installed for zone isolation will be run into the producing lateral.

F) COMPLETIONS SYSTEM

A 4-1/2" completion system with open hole packers will be run in the producing lateral to a depth of 18,927'. The top of the Completion System will be set at approximately 7,839'. Cement will not be required for this system.

G) H_2S SAFTEY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located in the SOPA, H_2S equipment will be rigged up after setting surface casing. For the wells located inside the SOPA the flare pit or ½ steel pits will be located 150' from the location. For wells located outside the SOPA the flare pit or ½ steel pit will be located 100' away from the location. **(See page 6 of Survey plat package and diagram 2)** There is not any H_2S anticipated in the area, although in the event that H_2S is encountered, the H_2S contingency plan attached will be implemented. **(Please refer to diagram 2 for choke manifold and closed loop system layout.) See H2S location layout diagram for location of all H2S equipment on location.**

H) CLOSED LOOP AND CHOKE MANIFLOLD

Please see diagram 2.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3532 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 3,850'-7,549' TVD.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

35 days drilling operations

14 days completion operations

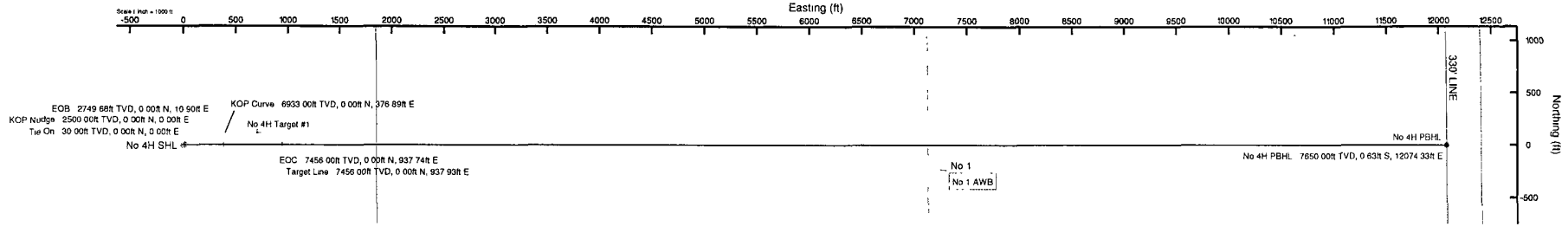
JDB

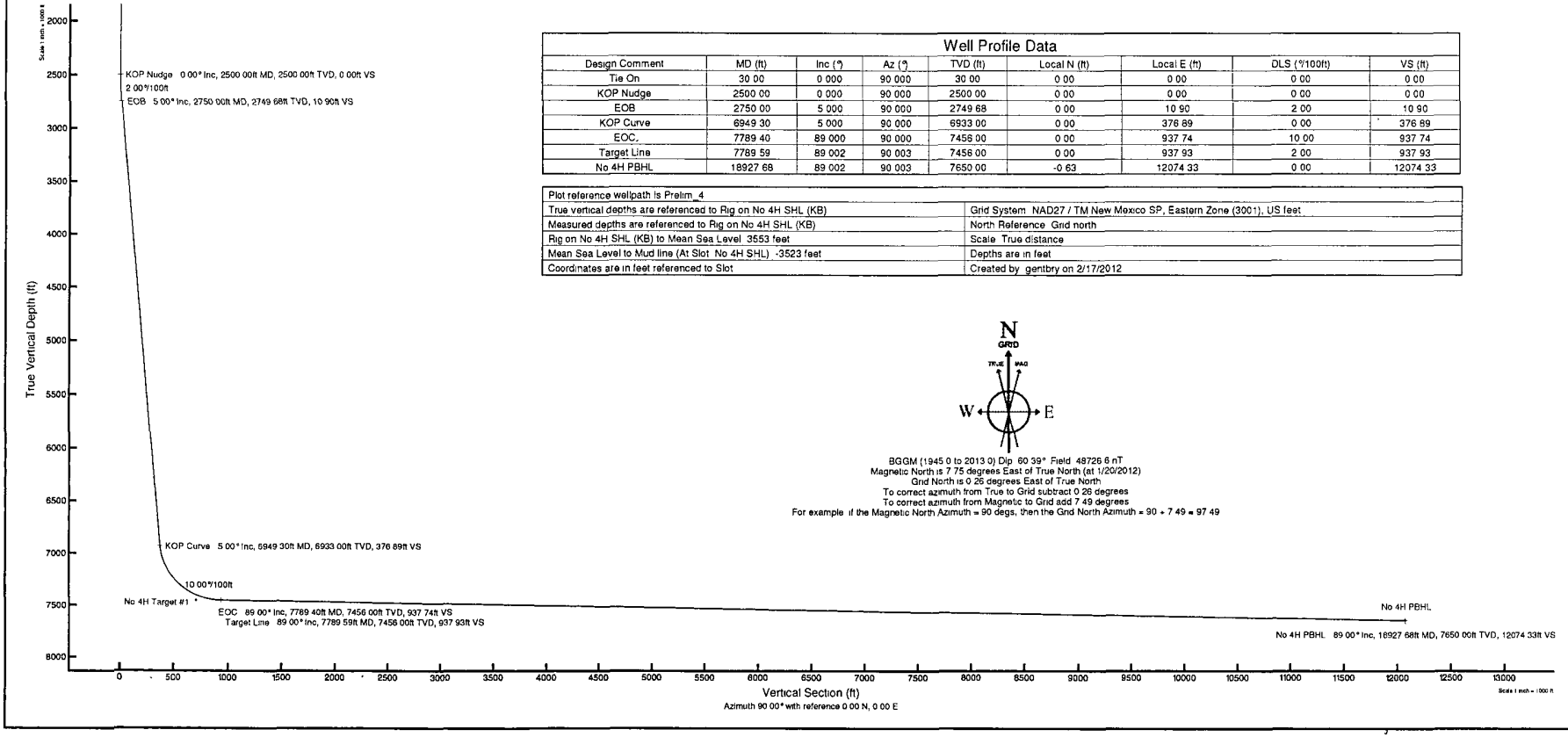
BOPCO, L.P.

Location Eddy County, NM
Field Big Eddy Unit Drilling Island 5
Facility Big Eddy Unit DI5 No 4H

Slot No 4H SHL
Well No 4H
Wellbore No 4H PWB

BAKER HUGHES





Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	30 00	0 000	90 000	30 00	0 00	0 00	0 00	0 00
KOP Nudge	2500 00	0 000	90 000	2500 00	0 00	0 00	0 00	0 00
EOB	2750 00	5 000	90 000	2749 68	0 00	10 90	2 00	10 90
KOP Curve	6949 30	5 000	90 000	6933 00	0 00	376 89	0 00	376 89
EOC	7789 40	89 000	90 000	7456 00	0 00	937 74	10 00	937 74
Target Line	7789 59	89 002	90 003	7456 00	0 00	937 93	2 00	937 93
No 4H PBHL	18927 68	89 002	90 003	7650 00	-0 63	12074 33	0 00	12074 33

Plot reference wellpath is Prelim_4	
True vertical depths are referenced to Rig on No 4H SHL (KB)	Grid System NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 4H SHL (KB)	North Reference Grid north
Rig on No 4H SHL (KB) to Mean Sea Level 3553 feet	Scale True distance
Mean Sea Level to Mud line (At Slot No 4H SHL) -3523 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by gentbry on 2/17/2012

BGGM (1945 0 to 2013 0) Dip 60 39° Field 48726 6 nT
Magnetic North is 7 75 degrees East of True North (at 1/20/2012)
Grid North is 0 26 degrees East of True North
To correct azimuth from True to Grid subtract 0 26 degrees
To correct azimuth from Magnetic to Grid add 7 49 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 49 = 97 49

Planned Wellpath Report

Prelim_4

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.4H SHL**
Area	**Eddy County, NM**	Well	**No.4H**
Field	**Big Eddy Unit Drilling Island 5**	Wellbore	**No.4H PWB**
Facility	**Big Eddy Unit DI5 No.4H**		

REPORT SETUP INFORMATION			
Projection System	**NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 3.0.0**
North Reference	**Grid**	User	**Gentbry**
Scale	**0.999934**	Report Generated	**2/17/2012 at 1:55:40 PM**
Convergence at slot	**0.26° East**	Database/Source file	**WA Midland/No.4H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W
Facility Reference Pt			**647722.36**	**562668.48**	32°32'45.492"N	103°51'14.189"W
Field Reference Pt			**647722.35**	**562788.51**	32°32'46.679"N	103°51'14.183"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No.4H SHL (KB) to Facility Vertical Datum	**30.00ft**
Horizontal Reference Pt	**Slot**	Rig on No.4H SHL (KB) to Mean Sea Level	**3553.00ft**
Vertical Reference Pt	**Rig on No.4H SHL (KB)**	Rig on No.4H SHL (KB) to Mud Line at Slot (No.4H SHL)	**30.00ft**
MD Reference Pt	**Rig on No.4H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**90.00°**

Planned Wellpath Report

Prelim_4

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5 No.4H		

WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	90.000	0.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
30.00	0.000	90.000	30.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	Tie On
130.00†	0.000	90.000	130.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
230.00†	0.000	90.000	230.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
330.00†	0.000	90.000	330.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
430.00†	0.000	90.000	430.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
530.00†	0.000	90.000	530.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
630.00†	0.000	90.000	630.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
677.00†	0.000	90.000	677.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	Rustler
730.00†	0.000	90.000	730.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
830.00†	0.000	90.000	830.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
859.00†	0.000	90.000	859.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	T/Salt
930.00†	0.000	90.000	930.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1030.00†	0.000	90.000	1030.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1130.00†	0.000	90.000	1130.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1230.00†	0.000	90.000	1230.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1330.00†	0.000	90.000	1330.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1430.00†	0.000	90.000	1430.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1530.00†	0.000	90.000	1530.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1630.00†	0.000	90.000	1630.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1730.00†	0.000	90.000	1730.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1830.00†	0.000	90.000	1830.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1930.00†	0.000	90.000	1930.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2030.00†	0.000	90.000	2030.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2130.00†	0.000	90.000	2130.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2230.00†	0.000	90.000	2230.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2330.00†	0.000	90.000	2330.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2430.00†	0.000	90.000	2430.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2500.00	0.000	90.000	2500.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	KOP Nudge
2530.00†	0.600	90.000	2530.00	0.16	0.00	0.16	647722.51	562668.48	32°32'45.492"N	103°51'14.188"W	2.00	
2630.00†	2.600	90.000	2629.96	2.95	0.00	2.95	647725.30	562668.48	32°32'45.492"N	103°51'14.155"W	2.00	
2730.00†	4.600	90.000	2729.75	9.23	0.00	9.23	647731.58	562668.48	32°32'45.491"N	103°51'14.082"W	2.00	
2750.00	5.000	90.000	2749.68	10.90	0.00	10.90	647733.26	562668.48	32°32'45.491"N	103°51'14.062"W	2.00	EOB
2804.52†	5.000	90.000	2804.00	15.65	0.00	15.65	647738.01	562668.48	32°32'45.491"N	103°51'14.007"W	0.00	T/Tansill
2830.00†	5.000	90.000	2829.38	17.87	0.00	17.87	647740.23	562668.48	32°32'45.491"N	103°51'13.981"W	0.00	
2904.91†	5.000	90.000	2904.00	24.40	0.00	24.40	647746.76	562668.48	32°32'45.491"N	103°51'13.904"W	0.00	T/Reef
2930.00†	5.000	90.000	2929.00	26.59	0.00	26.59	647748.94	562668.48	32°32'45.490"N	103°51'13.879"W	0.00	
3030.00†	5.000	90.000	3028.62	35.30	0.00	35.30	647757.66	562668.48	32°32'45.490"N	103°51'13.777"W	0.00	
3130.00†	5.000	90.000	3128.24	44.02	0.00	44.02	647766.37	562668.48	32°32'45.490"N	103°51'13.675"W	0.00	
3230.00†	5.000	90.000	3227.86	52.74	0.00	52.74	647775.09	562668.48	32°32'45.489"N	103°51'13.573"W	0.00	
3249.22†	5.000	90.000	3247.00	54.41	0.00	54.41	647776.76	562668.48	32°32'45.489"N	103°51'13.554"W	0.00	T/DMG
3330.00†	5.000	90.000	3327.48	61.45	0.00	61.45	647783.80	562668.48	32°32'45.489"N	103°51'13.472"W	0.00	
3430.00†	5.000	90.000	3427.10	70.17	0.00	70.17	647792.52	562668.48	32°32'45.489"N	103°51'13.370"W	0.00	
3530.00†	5.000	90.000	3526.71	78.88	0.00	78.88	647801.23	562668.48	32°32'45.488"N	103°51'13.268"W	0.00	
3630.00†	5.000	90.000	3626.33	87.60	0.00	87.60	647809.95	562668.48	32°32'45.488"N	103°51'13.166"W	0.00	

Planned Wellpath Report

Prelim_4

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5 No.4H		

WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3730.00†	5.000	90.000	3725.95	96.31	0.00	96.31	647818.66	562668.48	32°32'45.487"N	103°51'13.064"W	0.00	
3830.00†	5.000	90.000	3825.57	105.03	0.00	105.03	647827.38	562668.48	32°32'45.487"N	103°51'12.962"W	0.00	
3845.49†	5.000	90.000	3841.00	106.38	0.00	106.38	647828.73	562668.48	32°32'45.487"N	103°51'12.947"W	0.00	T/ Del Sd
3930.00†	5.000	90.000	3925.19	113.75	0.00	113.75	647836.09	562668.48	32°32'45.487"N	103°51'12.861"W	0.00	
4030.00†	5.000	90.000	4024.81	122.46	0.00	122.46	647844.81	562668.48	32°32'45.486"N	103°51'12.759"W	0.00	
4130.00†	5.000	90.000	4124.43	131.18	0.00	131.18	647853.52	562668.48	32°32'45.486"N	103°51'12.657"W	0.00	
4230.00†	5.000	90.000	4224.05	139.89	0.00	139.89	647862.24	562668.48	32°32'45.485"N	103°51'12.555"W	0.00	
4330.00†	5.000	90.000	4323.67	148.61	0.00	148.61	647870.95	562668.48	32°32'45.485"N	103°51'12.453"W	0.00	
4430.00†	5.000	90.000	4423.29	157.32	0.00	157.32	647879.67	562668.48	32°32'45.485"N	103°51'12.352"W	0.00	
4530.00†	5.000	90.000	4522.91	166.04	0.00	166.04	647888.38	562668.48	32°32'45.484"N	103°51'12.250"W	0.00	
4630.00†	5.000	90.000	4622.53	174.75	0.00	174.75	647897.10	562668.48	32°32'45.484"N	103°51'12.148"W	0.00	
4730.00†	5.000	90.000	4722.15	183.47	0.00	183.47	647905.81	562668.48	32°32'45.483"N	103°51'12.046"W	0.00	
4830.00†	5.000	90.000	4821.77	192.19	0.00	192.19	647914.53	562668.48	32°32'45.483"N	103°51'11.944"W	0.00	
4930.00†	5.000	90.000	4921.39	200.90	0.00	200.90	647923.24	562668.48	32°32'45.483"N	103°51'11.843"W	0.00	
5030.00†	5.000	90.000	5021.01	209.62	0.00	209.62	647931.96	562668.48	32°32'45.482"N	103°51'11.741"W	0.00	
5130.00†	5.000	90.000	5120.63	218.33	0.00	218.33	647940.67	562668.48	32°32'45.482"N	103°51'11.639"W	0.00	
5230.00†	5.000	90.000	5220.25	227.05	0.00	227.05	647949.39	562668.48	32°32'45.482"N	103°51'11.537"W	0.00	
5330.00†	5.000	90.000	5319.87	235.76	0.00	235.76	647958.10	562668.48	32°32'45.481"N	103°51'11.435"W	0.00	
5430.00†	5.000	90.000	5419.48	244.48	0.00	244.48	647966.82	562668.48	32°32'45.481"N	103°51'11.333"W	0.00	
5530.00†	5.000	90.000	5519.10	253.19	0.00	253.19	647975.53	562668.48	32°32'45.480"N	103°51'11.232"W	0.00	
5630.00†	5.000	90.000	5618.72	261.91	0.00	261.91	647984.25	562668.48	32°32'45.480"N	103°51'11.130"W	0.00	
5730.00†	5.000	90.000	5718.34	270.63	0.00	270.63	647992.96	562668.48	32°32'45.480"N	103°51'11.028"W	0.00	
5830.00†	5.000	90.000	5817.96	279.34	0.00	279.34	648001.68	562668.48	32°32'45.479"N	103°51'10.926"W	0.00	
5930.00†	5.000	90.000	5917.58	288.06	0.00	288.06	648010.39	562668.48	32°32'45.479"N	103°51'10.824"W	0.00	
6030.00†	5.000	90.000	6017.20	296.77	0.00	296.77	648019.11	562668.48	32°32'45.478"N	103°51'10.723"W	0.00	
6130.00†	5.000	90.000	6116.82	305.49	0.00	305.49	648027.82	562668.48	32°32'45.478"N	103°51'10.621"W	0.00	
6230.00†	5.000	90.000	6216.44	314.20	0.00	314.20	648036.54	562668.48	32°32'45.478"N	103°51'10.519"W	0.00	
6330.00†	5.000	90.000	6316.06	322.92	0.00	322.92	648045.25	562668.48	32°32'45.477"N	103°51'10.417"W	0.00	
6430.00†	5.000	90.000	6415.68	331.63	0.00	331.63	648053.97	562668.48	32°32'45.477"N	103°51'10.315"W	0.00	
6471.48†	5.000	90.000	6457.00	335.25	0.00	335.25	648057.58	562668.48	32°32'45.477"N	103°51'10.273"W	0.00	T/ Br. Cnyn
6530.00†	5.000	90.000	6515.30	340.35	0.00	340.35	648062.68	562668.48	32°32'45.476"N	103°51'10.214"W	0.00	
6630.00†	5.000	90.000	6614.92	349.07	0.00	349.07	648071.40	562668.48	32°32'45.476"N	103°51'10.112"W	0.00	
6730.00†	5.000	90.000	6714.54	357.78	0.00	357.78	648080.11	562668.48	32°32'45.476"N	103°51'10.010"W	0.00	
6830.00†	5.000	90.000	6814.16	366.50	0.00	366.50	648088.83	562668.48	32°32'45.475"N	103°51'09.908"W	0.00	
6930.00†	5.000	90.000	6913.78	375.21	0.00	375.21	648097.54	562668.48	32°32'45.475"N	103°51'09.806"W	0.00	
6949.30	5.000	90.000	6933.00	376.89	0.00	376.89	648099.22	562668.48	32°32'45.475"N	103°51'09.787"W	0.00	KOP Curve
6988.59†	8.929	90.000	6972.00	381.66	0.00	381.66	648103.99	562668.48	32°32'45.475"N	103°51'09.731"W	10.00	T/ Cobb Pay
7030.00†	13.069	90.000	7012.64	389.56	0.00	389.56	648111.89	562668.48	32°32'45.474"N	103°51'09.639"W	10.00	
7130.00†	23.068	90.000	7107.58	420.53	0.00	420.53	648142.86	562668.48	32°32'45.473"N	103°51'09.277"W	10.00	
7230.00†	33.067	90.000	7195.71	467.52	0.00	467.52	648189.85	562668.48	32°32'45.471"N	103°51'08.728"W	10.00	
7330.00†	43.066	90.000	7274.34	529.10	0.00	529.10	648251.42	562668.48	32°32'45.468"N	103°51'08.009"W	10.00	
7333.65†	43.430	90.000	7277.00	531.60	0.00	531.60	648253.92	562668.48	32°32'45.468"N	103°51'07.979"W	10.00	T/ LBC "8A"
7430.00†	53.064	90.000	7341.09	603.40	0.00	603.40	648325.71	562668.48	32°32'45.465"N	103°51'07.141"W	10.00	
7530.00†	63.063	90.000	7393.92	688.16	0.00	688.16	-648410.46	562668.48	32°32'45.461"N	103°51'06.151"W	10.00	
7630.00†	73.062	90.000	7431.23	780.80	0.00	780.80	648503.10	562668.48	32°32'45.457"N	103°51'05.068"W	10.00	

Planned Wellpath Report

Prelim_4

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5 No.4H		

WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7730.00†	83.060	90.000	7451.89	878.51	0.00	878.51	648600.81	562668.48	32°32'45.452"N	103°51'03.927"W	10.00	
7789.40	89.000	90.000	7456.00	937.74	0.00	937.74	648660.04	562668.48	32°32'45.450"N	103°51'03.235"W	10.00	EOC
7789.59	89.002	90.003	7456.00	937.93	0.00	937.93	648660.23	562668.48	32°32'45.450"N	103°51'03.233"W	2.00	Target Line
7830.00†	89.002	90.003	7456.71	978.33	0.00	978.33	648700.62	562668.47	32°32'45.448"N	103°51'02.761"W	0.00	
7930.00†	89.002	90.003	7458.45	1078.32	-0.01	1078.32	648800.60	562668.47	32°32'45.443"N	103°51'01.593"W	0.00	
8030.00†	89.002	90.003	7460.19	1178.30	-0.01	1178.30	648900.58	562668.46	32°32'45.439"N	103°51'00.425"W	0.00	
8130.00†	89.002	90.003	7461.93	1278.29	-0.02	1278.29	649000.56	562668.46	32°32'45.434"N	103°50'59.257"W	0.00	
8230.00†	89.002	90.003	7463.67	1378.27	-0.02	1378.27	649100.54	562668.45	32°32'45.430"N	103°50'58.089"W	0.00	
8330.00†	89.002	90.003	7465.42	1478.26	-0.03	1478.26	649200.51	562668.45	32°32'45.425"N	103°50'56.921"W	0.00	
8430.00†	89.002	90.003	7467.16	1578.24	-0.04	1578.24	649300.49	562668.44	32°32'45.421"N	103°50'55.753"W	0.00	
8530.00†	89.002	90.003	7468.90	1678.23	-0.04	1678.23	649400.47	562668.43	32°32'45.416"N	103°50'54.585"W	0.00	
8630.00†	89.002	90.003	7470.64	1778.21	-0.05	1778.21	649500.45	562668.43	32°32'45.412"N	103°50'53.417"W	0.00	
8730.00†	89.002	90.003	7472.38	1878.20	-0.05	1878.20	649600.43	562668.42	32°32'45.407"N	103°50'52.249"W	0.00	
8830.00†	89.002	90.003	7474.12	1978.18	-0.06	1978.18	649700.40	562668.42	32°32'45.402"N	103°50'51.081"W	0.00	
8930.00†	89.002	90.003	7475.87	2078.17	-0.06	2078.17	649800.38	562668.41	32°32'45.398"N	103°50'49.913"W	0.00	
9030.00†	89.002	90.003	7477.61	2178.15	-0.07	2178.15	649900.36	562668.41	32°32'45.393"N	103°50'48.745"W	0.00	
9130.00†	89.002	90.003	7479.35	2278.14	-0.08	2278.14	650000.34	562668.40	32°32'45.389"N	103°50'47.577"W	0.00	
9230.00†	89.002	90.003	7481.09	2378.12	-0.08	2378.12	650100.32	562668.39	32°32'45.384"N	103°50'46.409"W	0.00	
9330.00†	89.002	90.003	7482.83	2478.11	-0.09	2478.11	650200.29	562668.39	32°32'45.380"N	103°50'45.241"W	0.00	
9430.00†	89.002	90.003	7484.57	2578.09	-0.09	2578.09	650300.27	562668.38	32°32'45.375"N	103°50'44.073"W	0.00	
9530.00†	89.002	90.003	7486.32	2678.08	-0.10	2678.08	650400.25	562668.38	32°32'45.370"N	103°50'42.905"W	0.00	
9630.00†	89.002	90.003	7488.06	2778.06	-0.10	2778.06	650500.23	562668.37	32°32'45.366"N	103°50'41.737"W	0.00	
9730.00†	89.002	90.003	7489.80	2878.05	-0.11	2878.05	650600.21	562668.37	32°32'45.361"N	103°50'40.569"W	0.00	
9830.00†	89.002	90.003	7491.54	2978.03	-0.11	2978.03	650700.18	562668.36	32°32'45.357"N	103°50'39.401"W	0.00	
9930.00†	89.002	90.003	7493.28	3078.02	-0.12	3078.02	650800.16	562668.36	32°32'45.352"N	103°50'38.233"W	0.00	
10030.00†	89.002	90.003	7495.03	3178.00	-0.13	3178.00	650900.14	562668.35	32°32'45.347"N	103°50'37.065"W	0.00	
10130.00†	89.002	90.003	7496.77	3277.99	-0.13	3277.99	651000.12	562668.34	32°32'45.343"N	103°50'35.897"W	0.00	
10230.00†	89.002	90.003	7498.51	3377.97	-0.14	3377.97	651100.10	562668.34	32°32'45.338"N	103°50'34.729"W	0.00	
10330.00†	89.002	90.003	7500.25	3477.95	-0.14	3477.95	651200.07	562668.33	32°32'45.334"N	103°50'33.561"W	0.00	
10430.00†	89.002	90.003	7501.99	3577.94	-0.15	3577.94	651300.05	562668.33	32°32'45.329"N	103°50'32.393"W	0.00	
10530.00†	89.002	90.003	7503.73	3677.92	-0.15	3677.92	651400.03	562668.32	32°32'45.324"N	103°50'31.225"W	0.00	
10630.00†	89.002	90.003	7505.48	3777.91	-0.16	3777.91	651500.01	562668.32	32°32'45.320"N	103°50'30.057"W	0.00	
10730.00†	89.002	90.003	7507.22	3877.89	-0.17	3877.89	651599.99	562668.31	32°32'45.315"N	103°50'28.889"W	0.00	
10830.00†	89.002	90.003	7508.96	3977.88	-0.17	3977.88	651699.96	562668.30	32°32'45.310"N	103°50'27.721"W	0.00	
10930.00†	89.002	90.003	7510.70	4077.86	-0.18	4077.86	651799.94	562668.30	32°32'45.306"N	103°50'26.553"W	0.00	
11030.00†	89.002	90.003	7512.44	4177.85	-0.18	4177.85	651899.92	562668.29	32°32'45.301"N	103°50'25.385"W	0.00	
11130.00†	89.002	90.003	7514.18	4277.83	-0.19	4277.83	651999.90	562668.29	32°32'45.297"N	103°50'24.217"W	0.00	
11230.00†	89.002	90.003	7515.93	4377.82	-0.19	4377.82	652099.88	562668.28	32°32'45.292"N	103°50'23.049"W	0.00	
11330.00†	89.002	90.003	7517.67	4477.80	-0.20	4477.80	652199.86	562668.28	32°32'45.287"N	103°50'21.881"W	0.00	
11430.00†	89.002	90.003	7519.41	4577.79	-0.20	4577.79	652299.83	562668.27	32°32'45.283"N	103°50'20.713"W	0.00	
11530.00†	89.002	90.003	7521.15	4677.77	-0.21	4677.77	652399.81	562668.27	32°32'45.278"N	103°50'19.545"W	0.00	
11630.00†	89.002	90.003	7522.89	4777.76	-0.22	4777.76	652499.79	562668.26	32°32'45.273"N	103°50'18.377"W	0.00	
11730.00†	89.002	90.003	7524.64	4877.74	-0.22	4877.74	652599.77	562668.25	32°32'45.269"N	103°50'17.209"W	0.00	
11830.00†	89.002	90.003	7526.38	4977.73	-0.23	4977.73	652699.75	562668.25	32°32'45.264"N	103°50'16.041"W	0.00	
11930.00†	89.002	90.003	7528.12	5077.71	-0.23	5077.71	652799.72	562668.24	32°32'45.259"N	103°50'14.873"W	0.00	

Planned Wellpath Report

Prelim_4

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5 No.4H		

WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12030.00†	89.002	90.003	7529.86	5177.70	-0.24	5177.70	652899.70	562668.24	32°32'45.255"N	103°50'13.705"W	0.00	
12130.00†	89.002	90.003	7531.60	5277.68	-0.24	5277.68	652999.68	562668.23	32°32'45.250"N	103°50'12.537"W	0.00	
12230.00†	89.002	90.003	7533.34	5377.67	-0.25	5377.67	653099.66	562668.23	32°32'45.245"N	103°50'11.369"W	0.00	
12330.00†	89.002	90.003	7535.09	5477.65	-0.26	5477.65	653199.64	562668.22	32°32'45.241"N	103°50'10.201"W	0.00	
12430.00†	89.002	90.003	7536.83	5577.64	-0.26	5577.64	653299.61	562668.21	32°32'45.236"N	103°50'09.033"W	0.00	
12530.00†	89.002	90.003	7538.57	5677.62	-0.27	5677.62	653399.59	562668.21	32°32'45.231"N	103°50'07.866"W	0.00	
12630.00†	89.002	90.003	7540.31	5777.61	-0.27	5777.61	653499.57	562668.20	32°32'45.227"N	103°50'06.698"W	0.00	
12730.00†	89.002	90.003	7542.05	5877.59	-0.28	5877.59	653599.55	562668.20	32°32'45.222"N	103°50'05.530"W	0.00	
12830.00†	89.002	90.003	7543.79	5977.58	-0.28	5977.58	653699.53	562668.19	32°32'45.217"N	103°50'04.362"W	0.00	
12930.00†	89.002	90.003	7545.54	6077.56	-0.29	6077.56	653799.50	562668.19	32°32'45.213"N	103°50'03.194"W	0.00	
13030.00†	89.002	90.003	7547.28	6177.55	-0.30	6177.55	653899.48	562668.18	32°32'45.208"N	103°50'02.026"W	0.00	
13130.00†	89.002	90.003	7549.02	6277.53	-0.30	6277.53	653999.46	562668.18	32°32'45.203"N	103°50'00.858"W	0.00	
13230.00†	89.002	90.003	7550.76	6377.51	-0.31	6377.51	654099.44	562668.17	32°32'45.198"N	103°49'59.690"W	0.00	
13330.00†	89.002	90.003	7552.50	6477.50	-0.31	6477.50	654199.42	562668.16	32°32'45.194"N	103°49'58.522"W	0.00	
13430.00†	89.002	90.003	7554.24	6577.48	-0.32	6577.48	654299.39	562668.16	32°32'45.189"N	103°49'57.354"W	0.00	
13530.00†	89.002	90.003	7555.99	6677.47	-0.32	6677.47	654399.37	562668.15	32°32'45.184"N	103°49'56.186"W	0.00	
13630.00†	89.002	90.003	7557.73	6777.45	-0.33	6777.45	654499.35	562668.15	32°32'45.180"N	103°49'55.018"W	0.00	
13730.00†	89.002	90.003	7559.47	6877.44	-0.33	6877.44	654599.33	562668.14	32°32'45.175"N	103°49'53.850"W	0.00	
13830.00†	89.002	90.003	7561.21	6977.42	-0.34	6977.42	654699.31	562668.14	32°32'45.170"N	103°49'52.682"W	0.00	
13930.00†	89.002	90.003	7562.95	7077.41	-0.35	7077.41	654799.28	562668.13	32°32'45.165"N	103°49'51.514"W	0.00	
14030.00†	89.002	90.003	7564.70	7177.39	-0.35	7177.39	654899.26	562668.12	32°32'45.161"N	103°49'50.346"W	0.00	
14130.00†	89.002	90.003	7566.44	7277.38	-0.36	7277.38	654999.24	562668.12	32°32'45.156"N	103°49'49.178"W	0.00	
14230.00†	89.002	90.003	7568.18	7377.36	-0.36	7377.36	655099.22	562668.11	32°32'45.151"N	103°49'48.010"W	0.00	
14330.00†	89.002	90.003	7569.92	7477.35	-0.37	7477.35	655199.20	562668.11	32°32'45.147"N	103°49'46.842"W	0.00	
14430.00†	89.002	90.003	7571.66	7577.33	-0.37	7577.33	655299.17	562668.10	32°32'45.142"N	103°49'45.674"W	0.00	
14530.00†	89.002	90.003	7573.40	7677.32	-0.38	7677.32	655399.15	562668.10	32°32'45.137"N	103°49'44.506"W	0.00	
14630.00†	89.002	90.003	7575.15	7777.30	-0.39	7777.30	655499.13	562668.09	32°32'45.132"N	103°49'43.338"W	0.00	
14730.00†	89.002	90.003	7576.89	7877.29	-0.39	7877.29	655599.11	562668.09	32°32'45.128"N	103°49'42.170"W	0.00	
14830.00†	89.002	90.003	7578.63	7977.27	-0.40	7977.27	655699.09	562668.08	32°32'45.123"N	103°49'41.002"W	0.00	
14930.00†	89.002	90.003	7580.37	8077.26	-0.40	8077.26	655799.06	562668.07	32°32'45.118"N	103°49'39.834"W	0.00	
15030.00†	89.002	90.003	7582.11	8177.24	-0.41	8177.24	655899.04	562668.07	32°32'45.113"N	103°49'38.666"W	0.00	
15130.00†	89.002	90.003	7583.85	8277.23	-0.41	8277.23	655999.02	562668.06	32°32'45.109"N	103°49'37.498"W	0.00	
15230.00†	89.002	90.003	7585.60	8377.21	-0.42	8377.21	656099.00	562668.06	32°32'45.104"N	103°49'36.330"W	0.00	
15330.00†	89.002	90.003	7587.34	8477.20	-0.42	8477.20	656198.98	562668.05	32°32'45.099"N	103°49'35.162"W	0.00	
15430.00†	89.002	90.003	7589.08	8577.18	-0.43	8577.18	656298.95	562668.05	32°32'45.094"N	103°49'33.994"W	0.00	
15530.00†	89.002	90.003	7590.82	8677.17	-0.44	8677.17	656398.93	562668.04	32°32'45.090"N	103°49'32.826"W	0.00	
15630.00†	89.002	90.003	7592.56	8777.15	-0.44	8777.15	656498.91	562668.03	32°32'45.085"N	103°49'31.658"W	0.00	
15730.00†	89.002	90.003	7594.30	8877.14	-0.45	8877.14	656598.89	562668.03	32°32'45.080"N	103°49'30.490"W	0.00	
15830.00†	89.002	90.003	7596.05	8977.12	-0.45	8977.12	656698.87	562668.02	32°32'45.075"N	103°49'29.322"W	0.00	
15930.00†	89.002	90.003	7597.79	9077.11	-0.46	9077.11	656798.84	562668.02	32°32'45.070"N	103°49'28.154"W	0.00	
16030.00†	89.002	90.003	7599.53	9177.09	-0.46	9177.09	656898.82	562668.01	32°32'45.066"N	103°49'26.986"W	0.00	
16130.00†	89.002	90.003	7601.27	9277.07	-0.47	9277.07	656998.80	562668.01	32°32'45.061"N	103°49'25.818"W	0.00	
16230.00†	89.002	90.003	7603.01	9377.06	-0.48	9377.06	657098.78	562668.00	32°32'45.056"N	103°49'24.650"W	0.00	
16330.00†	89.002	90.003	7604.76	9477.04	-0.48	9477.04	657198.76	562668.00	32°32'45.051"N	103°49'23.482"W	0.00	
16430.00†	89.002	90.003	7606.50	9577.03	-0.49	9577.03	657298.74	562667.99	32°32'45.046"N	103°49'22.314"W	0.00	

Planned Wellpath Report

Prelim_4

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.4H SHL**
Area	**Eddy County, NM**	Well	**No.4H**
Field	**Big Eddy Unit Drilling Island 5**	Wellbore	**No.4H PWB**
Facility	**Big Eddy Unit DI5 No.4H**		

WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16530.00†	89.002	90.003	7608.24	9677.01	-0.49	9677.01	657398.71	562667.98	32°32'45.042"N	103°49'21.146"W	0.00	
16630.00†	89.002	90.003	7609.98	9777.00	-0.50	9777.00	657498.69	562667.98	32°32'45.037"N	103°49'19.978"W	0.00	
16730.00†	89.002	90.003	7611.72	9876.98	-0.50	9876.98	657598.67	562667.97	32°32'45.032"N	103°49'18.810"W	0.00	
16830.00†	89.002	90.003	7613.46	9976.97	-0.51	9976.97	657698.65	562667.97	32°32'45.027"N	103°49'17.642"W	0.00	
16930.00†	89.002	90.003	7615.21	10076.95	-0.51	10076.95	657798.63	562667.96	32°32'45.022"N	103°49'16.474"W	0.00	
17030.00†	89.002	90.003	7616.95	10176.94	-0.52	10176.94	657898.60	562667.96	32°32'45.018"N	103°49'15.306"W	0.00	
17130.00†	89.002	90.003	7618.69	10276.92	-0.53	10276.92	657998.58	562667.95	32°32'45.013"N	103°49'14.138"W	0.00	
17230.00†	89.002	90.003	7620.43	10376.91	-0.53	10376.91	658098.56	562667.94	32°32'45.008"N	103°49'12.970"W	0.00	
17330.00†	89.002	90.003	7622.17	10476.89	-0.54	10476.89	658198.54	562667.94	32°32'45.003"N	103°49'11.802"W	0.00	
17430.00†	89.002	90.003	7623.91	10576.88	-0.54	10576.88	658298.52	562667.93	32°32'44.998"N	103°49'10.634"W	0.00	
17530.00†	89.002	90.003	7625.66	10676.86	-0.55	10676.86	658398.49	562667.93	32°32'44.994"N	103°49'09.466"W	0.00	
17630.00†	89.002	90.003	7627.40	10776.85	-0.55	10776.85	658498.47	562667.92	32°32'44.989"N	103°49'08.298"W	0.00	
17730.00†	89.002	90.003	7629.14	10876.83	-0.56	10876.83	658598.45	562667.92	32°32'44.984"N	103°49'07.130"W	0.00	
17830.00†	89.002	90.003	7630.88	10976.82	-0.57	10976.82	658698.43	562667.91	32°32'44.979"N	103°49'05.962"W	0.00	
17930.00†	89.002	90.003	7632.62	11076.80	-0.57	11076.80	658798.41	562667.91	32°32'44.974"N	103°49'04.794"W	0.00	
18030.00†	89.002	90.003	7634.36	11176.79	-0.58	11176.79	658898.38	562667.90	32°32'44.969"N	103°49'03.627"W	0.00	
18130.00†	89.002	90.003	7636.11	11276.77	-0.58	11276.77	658998.36	562667.89	32°32'44.964"N	103°49'02.459"W	0.00	
18230.00†	89.002	90.003	7637.85	11376.76	-0.59	11376.76	659098.34	562667.89	32°32'44.960"N	103°49'01.291"W	0.00	
18330.00†	89.002	90.003	7639.59	11476.74	-0.59	11476.74	659198.32	562667.88	32°32'44.955"N	103°49'00.123"W	0.00	
18430.00†	89.002	90.003	7641.33	11576.73	-0.60	11576.73	659298.30	562667.88	32°32'44.950"N	103°48'58.955"W	0.00	
18530.00†	89.002	90.003	7643.07	11676.71	-0.60	11676.71	659398.27	562667.87	32°32'44.945"N	103°48'57.787"W	0.00	
18630.00†	89.002	90.003	7644.82	11776.70	-0.61	11776.70	659498.25	562667.87	32°32'44.940"N	103°48'56.619"W	0.00	
18730.00†	89.002	90.003	7646.56	11876.68	-0.62	11876.68	659598.23	562667.86	32°32'44.935"N	103°48'55.451"W	0.00	
18830.00†	89.002	90.003	7648.30	11976.67	-0.62	11976.67	659698.21	562667.85	32°32'44.930"N	103°48'54.283"W	0.00	
18927.68	89.002	90.003	7650.00†	12074.33	-0.63	12074.33	659795.86	562667.85	32°32'44.926"N	103°48'53.142"W	0.00	No.4H PBHL

Planned Wellpath Report

Prelim_4

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.4H SHL**
Area	**Eddy County, NM**	Well	**No.4H**
Field	**Big Eddy Unit Drilling Island 5**	Wellbore	**No.4H PWB**
Facility	**Big Eddy Unit DI5 No.4H**		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.4H Target #1		7456.00	111.69	699.94	648422.25	562780.15	32°32'46.566"N	103°51'06.007"W	point
1) No.4H PBHL	18927.68	7650.00	-0.63	12074.33	**659795.86**	**562667.85**	32°32'44.926"N	103°48'53.142"W	point

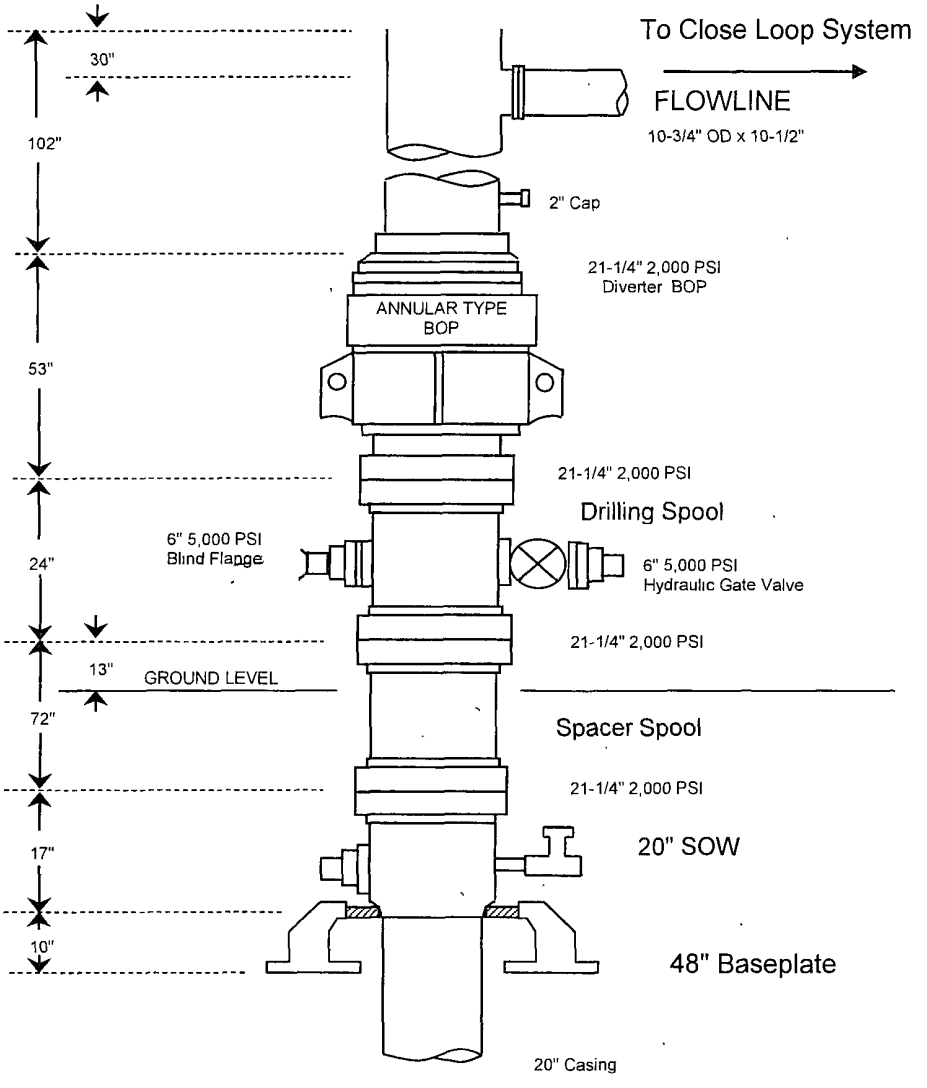
SURVEY PROGRAM - Ref Wellbore: No.4H PWB Ref Wellpath: Prelim_4

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	18928.35	NaviTrak (Standard)		No.4H PWB

BOPCO, L. P

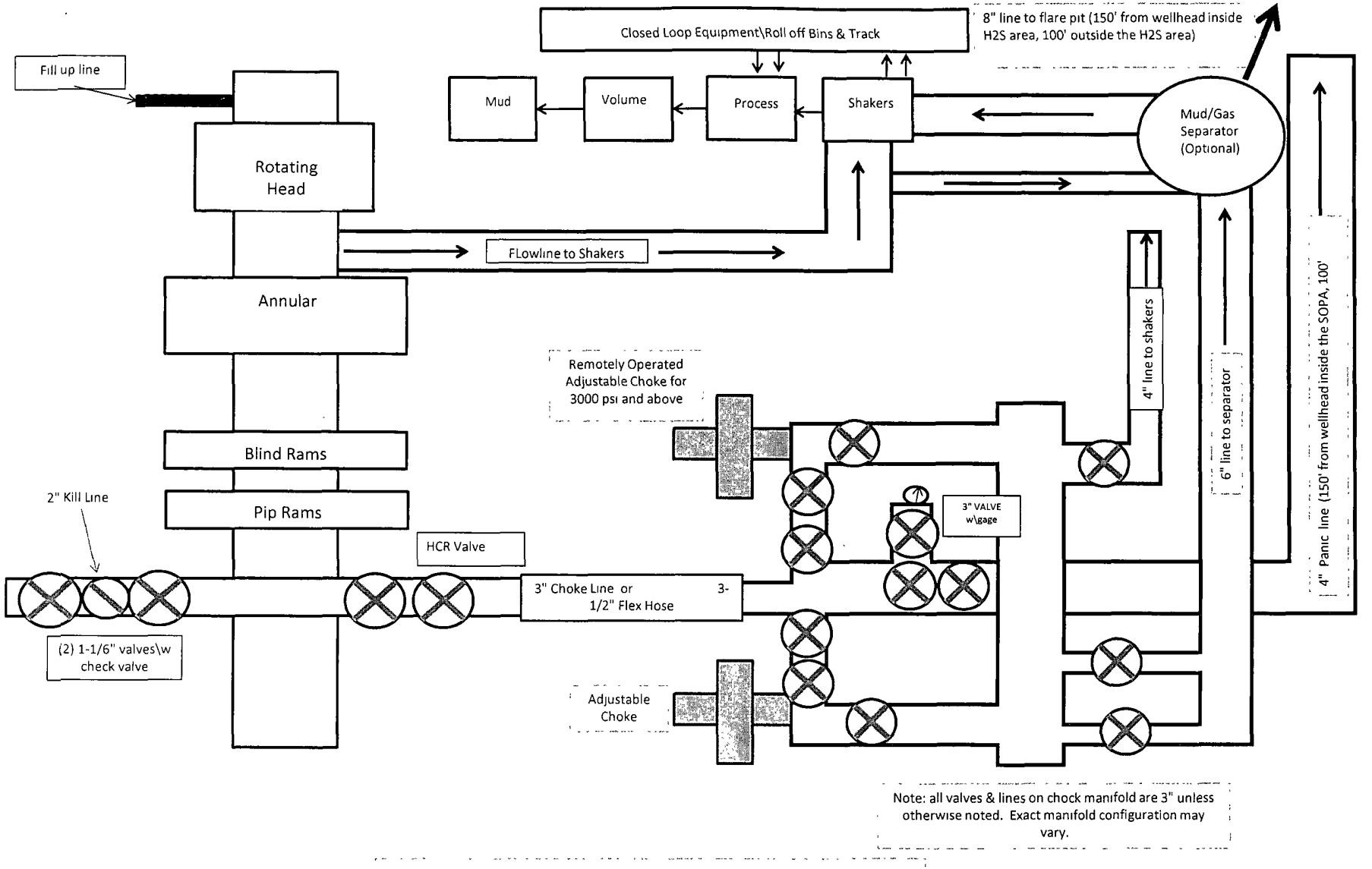
20" 2,000 PSI Diverter

full line required



Note: Actual lengths of casing heads may vary. Always measure items prior to installing in order to ensure proper spacing.

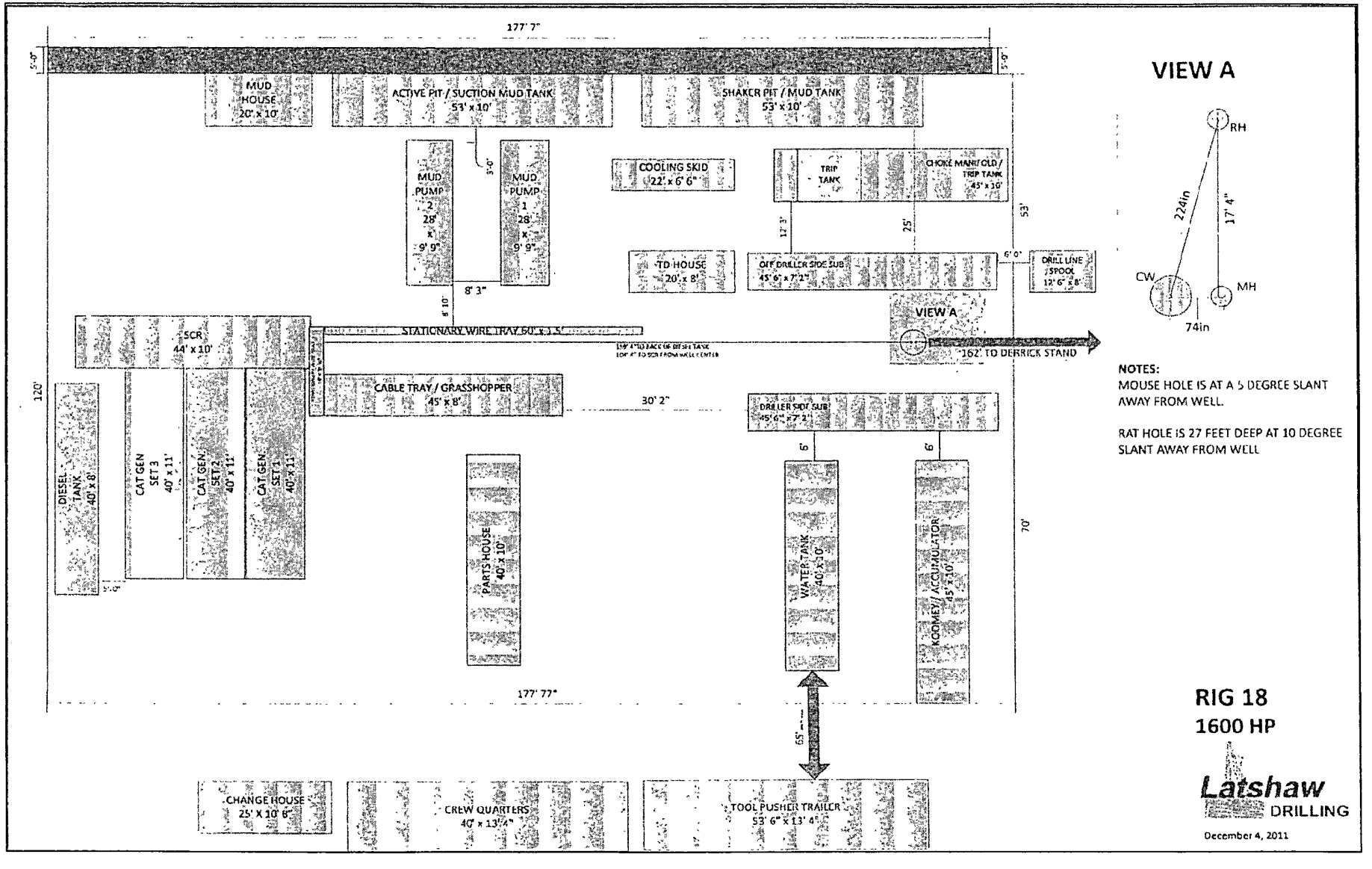
DIAGRAM B



Note: all valves & lines on chock manifold are 3" unless otherwise noted. Exact manifold configuration may vary.

13-5/8" X 5-M BOPE (2 Rams and Rotating Head) & Closed Loop System Equipment Schematic
Diagram 2

Latshaw 18 Rig Diagram Exhibit



NOTES:
MOUSE HOLE IS AT A 5 DEGREE SLANT AWAY FROM WELL.

RAT HOLE IS 27 FEET DEEP AT 10 DEGREE SLANT AWAY FROM WELL

RIG 18
1600 HP

Latshaw DRILLING

December 4, 2011

BOPCO, L. P.
6 DESTA DRIVE, SUITE 3700 (79705)
P. O. BOX 2760
MIDLAND, TEXAS 79702

(432) 683-2277 **FAX (432) 687-0329**

February 17, 2012

Bureau of Land Management
620 E. Greene
Carlsbad, New Mexico 88220
Attn: John Chopp

Dear Mr. Chopp,

BOPCO, L.P. respectfully requests exception to the Prairie Chicken timing restrictions for BEU DI5 4H located 1980' FNL, 1848' FEL, of Section 27, T20S, R31E, Eddy County, New Mexico.

Sincerely,

Stephen Martinez
Division Drilling Superintendent

SMM/JDB

BOPCO, L.P.

P. O. Box 2760
Midland, Texas 79702

432-683-2277 FAX-432-687-0329

February 17, 2012

Bureau of Land Management
Carlsbad Field Office
620 East Green Street
Carlsbad, New Mexico 88220-6292

Attn: Mr. Don Peterson – Assistant Field Manager, Minerals

RE: APPLICATION FOR PERMIT TO DRILL
BEU DI5 4H
1980' FNL, 1848' FEL, SEC. 27, T20S, R31E, EDDY COUNTY, NM

Dear Mr Peterson,

In reference to the above captioned well, I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in the attached eight point drilling plan and multi-use surface plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by BOPCO, L.P. and it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

If you have any questions regarding the accuracy of the plan provided herein, please do not hesitate to contact me at (432) 683-2277.

Sincerely,

Stephen M. Martinez
Division Drilling Superintendent

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO LP
LEASE NO.:	LC-065914
WELL NAME & NO.:	BIG EDDY UNIT D15 #4H
SURFACE HOLE FOOTAGE:	1980' FNL & 1848' FEL
BOTTOM HOLE FOOTAGE	2050' FNL & 330' FEL (Sec. 25)
LOCATION:	Section 27, T.20 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Commercial Well Determination
The proposed well is not within a participating area. A commercial well determination must be submitted to the BLM Carlsbad Office.

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

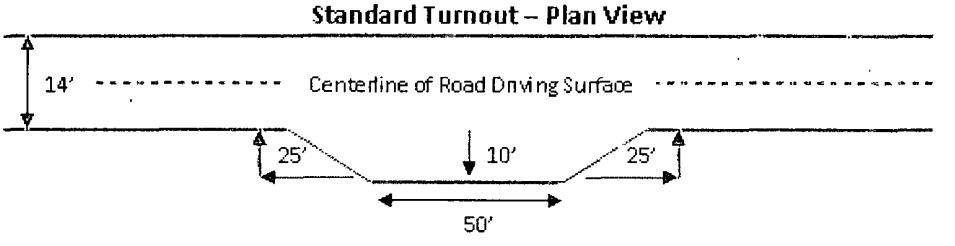
Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

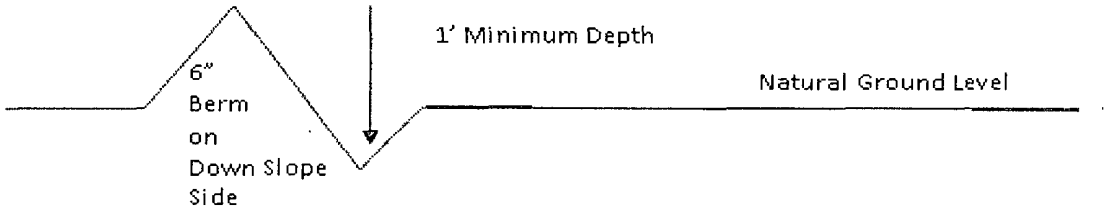
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

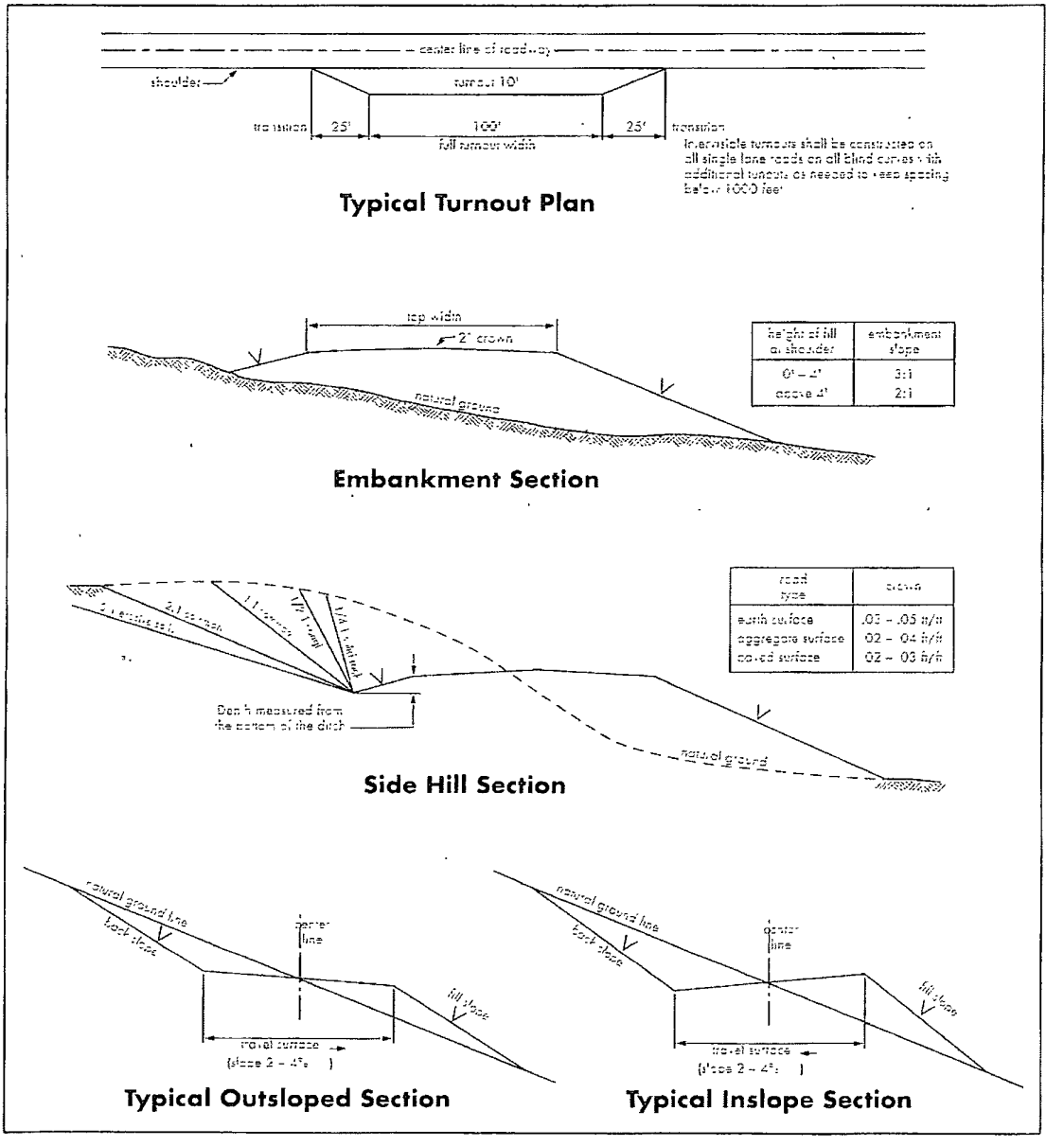
Fence Requirement

Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall 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 program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#).

Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

Wait on cement (WOC) time prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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
Possible water and brine flows in the Rustler, Salado and Castile formations.
Possible lost circulation within the Rustler, Delaware and Bone Spring.

1. The **20** inch surface casing shall be set at approximately **849** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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 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 **13-3/8** inch intermediate casing is:

   ☒ 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.**

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:

   ☒ 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 Capitan Reef and potash. Additional cement may be required – excess calculates to 17%.**

4. 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. Operator should have plans as to how they will achieve circulation on the next stage.

   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 – excess calculates to 22%.**

5. Cement not required on the **4-1/2"** completion assembly. **Packer system being used.**

6. 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.

7. 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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review**. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** intermediate casing shoe shall be **3000 (3M)** psi. **Operator installing a 5M but testing as a 3M system.**

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    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. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 051412

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed