

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**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. NMNM06808
2. Name of Operator BOPCO LP		6. If Indian, Allottee or Tribe Name
Contact: COURTNEY LOCKHART E-Mail: cjllockhart@basspet.com		7. If Unit or CA/Agreement, Name and/or No. NMNM07965X
3a. Address PO BOX 2760 MIDLAND, TX 79702	3b. Phone No. (include area code) Ph: 432-221-7307	8. Well Name and No. JAMES RANCH UNIT 126H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 21 T22S R30E SWNE 1441FNL 1821FEL 32.380983 N Lat, 103.883497 W Lon		9. API Well No. 30-015-39254
		10. Field and Pool, or Exploratory QUAHADA RIDGE(DELAWARE)
		11. County or Parish, and State EDDY COUNTY COUNTY, 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	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 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, L.P., respectfully requests a change to the current location of the James Ranch Unit #126H from its original location of 1,441' FNL & 1,821' FEL of Section 21, T22S-R30E. A new surface location of 1,431' FNL & 1,821' of Section 21, T22S-R30E is being requested with respect given to our agreement with Mosiac regarding the area immediately surrounding the James Ranch 12 well. New survey plats and 8 point drilling plan are attached. Also attached hereto, is the waiver letter from Mosiac dated 2-16-2011.

RECEIVED

JUL 11 2013

NMOC D ARTESIA

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproved for record
NMOC D

Engr reviewed, new drilling O&A attached. 7/9/13

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #212159 verified by the BLM Well Information System For BOPCO LP, sent to the Carlsbad Committed to AFMSS for processing by WESLEY INGRAM on 06/29/2013 ()	
Name (Printed/Typed) COURTNEY LOCKHART	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 06/28/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <i>J. Strail</i>	Title <i>Field Manager</i>	Date <i>7-9-13</i>
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.		Office <i>Carlsbad</i>

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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****



Mosaic Potash Carlsbad Inc.
PO Box 71
1361 Potash Mines Road
Carlsbad, NM 88220
www.mosaicco.com

Tel 505-887-2871
Fax 505-887-0589

February 16, 2011

Mr. Brad Glasscock
BOPCO, L.P.
201 Main Street
Fort Worth, TX 76102-3131
(817) 339-7185

Dear Mr. Glasscock:

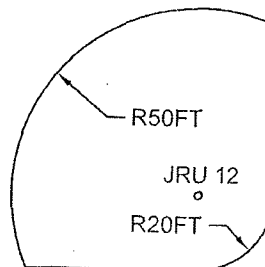
Per our discussions James Ranch Unit wells 128H, 126H, 132H, 134H, 136H, and 137H, all located at 1821' FEL and varying from 1431' to 1471' FNL of Section 21, T-22-S, R-30-E; Mosaic Potash Carlsbad Inc. does have a potash lease for this area and these locations are within our LMR. These locations are all currently planned within 20' of an existing gas well (JRU12). The drilling of these directional wells should cause no further loss of potash reserves, therefore Mosaic does not object to their locations at this time. In order to provide some latitude for adjusting the locations to meet other requirements, Mosaic would not object to moving these locations minimally to the north or to the west but would resist encroachment further to the south and east. Anywhere within an area extending 20' south and east or up to 50' north and west of JRU12 (see sketch below) would be agreeable.

As more information becomes available, our estimates of the extent of potash resources in any given area may change. Therefore, please consider a "no objection" or "objection" to these locations to be valid for one year only. Do not consider a "no objection offered" or an "objection offered" decision to be permanent.

Mosaic Potash submits this letter in lieu of the forms requested.

Sincerely,

Dan Morehouse
Mine Engineering Superintendent



DISTRICT I

1825 N. French Dr., Hobbs, NM 88240
Phone (505) 393-6161 Fax: (505) 393-0720

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone (505) 746-1283 Fax: (505) 746-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 354-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3460 Fax: (505) 478-3462

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 August 1, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name UNDESIGNATED (BONE SPRING)
Property Code 306407	Property Name JAMES RANCH UNIT		Well Number 126
OGRID No. 260737	Operator Name BOPCO, L.P.		Elevation 3165'

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	21	22 S	30 E		1431	NORTH	1821	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
LOT 1	19	22 S	30 E		660	NORTH	330	WEST	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

	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. <i>Courtney Lockhart</i> 6-25-13 Signature Date Courtney Lockhart Printed Name cjlockhart@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 supervision, and that the same is true and correct to the best of my belief. Date Surveyed Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977

PROPOSED BOTTOM HOLE LOCATION

Lat - N 32°22'59.17"
Long - W 103°55'41.24"
NMSPCE- N 503324.8
E 625088.2
(NAD-27)

SURFACE LOCATION

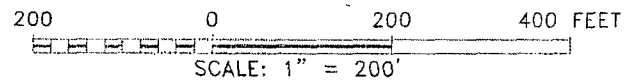
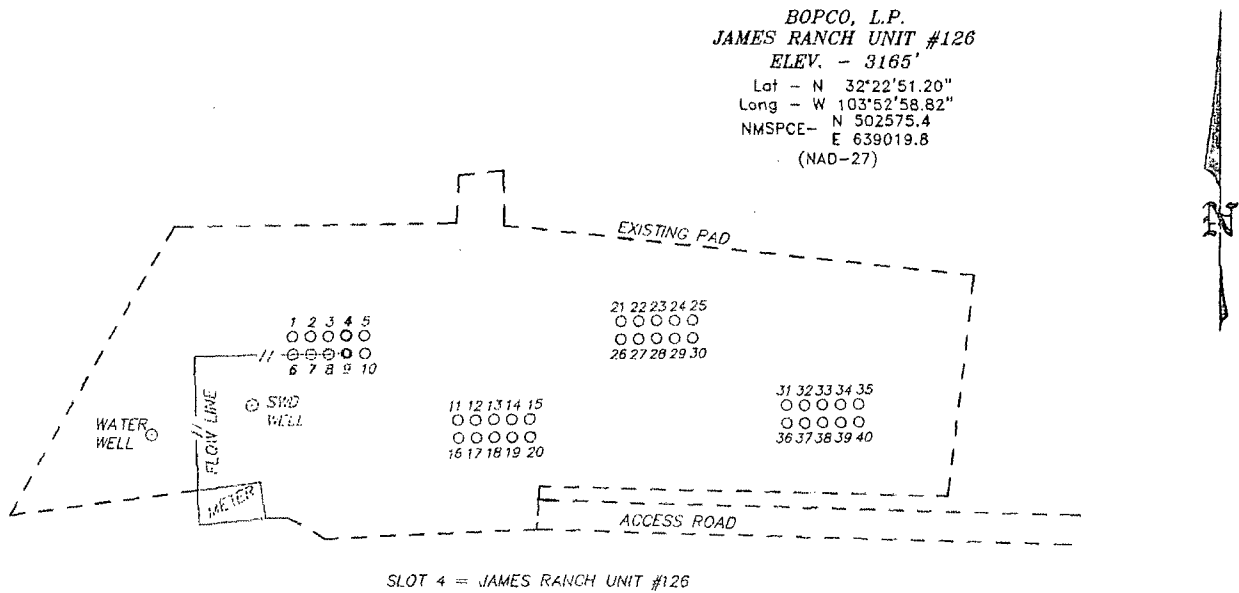
Lat - N 32°22'51.20"
Long - W 103°52'58.82"
NMSPCE- N 502575.4
E 639019.8
(NAD-27)

1" = 3000'

BASIN-SURVEYS

28737

SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF HWY 128 AND CIMARRON,
GO NORTH ON CIMARRON FOR APPROX. 6.2 MILES
TO LEASE ROAD, ON LEASE ROAD GO
SOUTHWESTERLY 0.2 MILES TURNING NORTHWESTERLY
1.3 MILES TO PROPOSED WELL LOCATION.

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

W.O. Number: 28737 Drawn By: JMS/JMS

Date: 05-16-2013 Disk: JMS - 28737WELL

BOPCO, L.P.

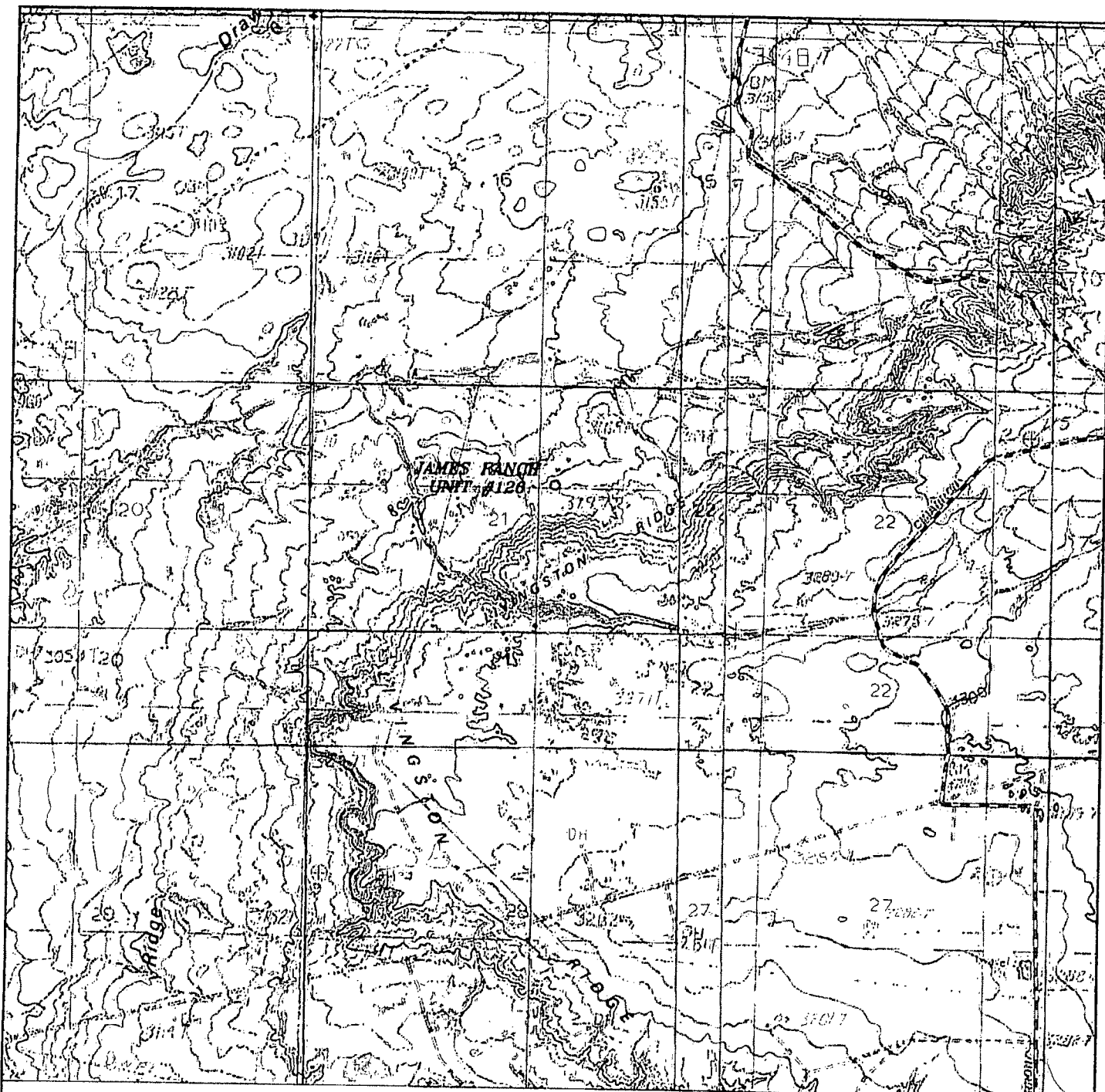
REF: JAMES RANCH UNIT #126 / WELL PAD TOPO

THE JAMES RANCH UNIT #126, LOCATED 1431'
FROM THE NORTH LINE AND 1821' FROM THE EAST LINE OF

SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST,

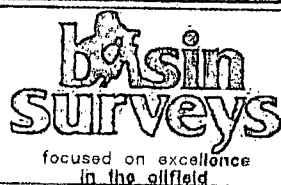
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 05-16-2013 Sheet 1 of 1 Sheets



JAMES RANCH UNIT #126

Located 1431' FNL and 1821' FEL
 Section 21, Township 22 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



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

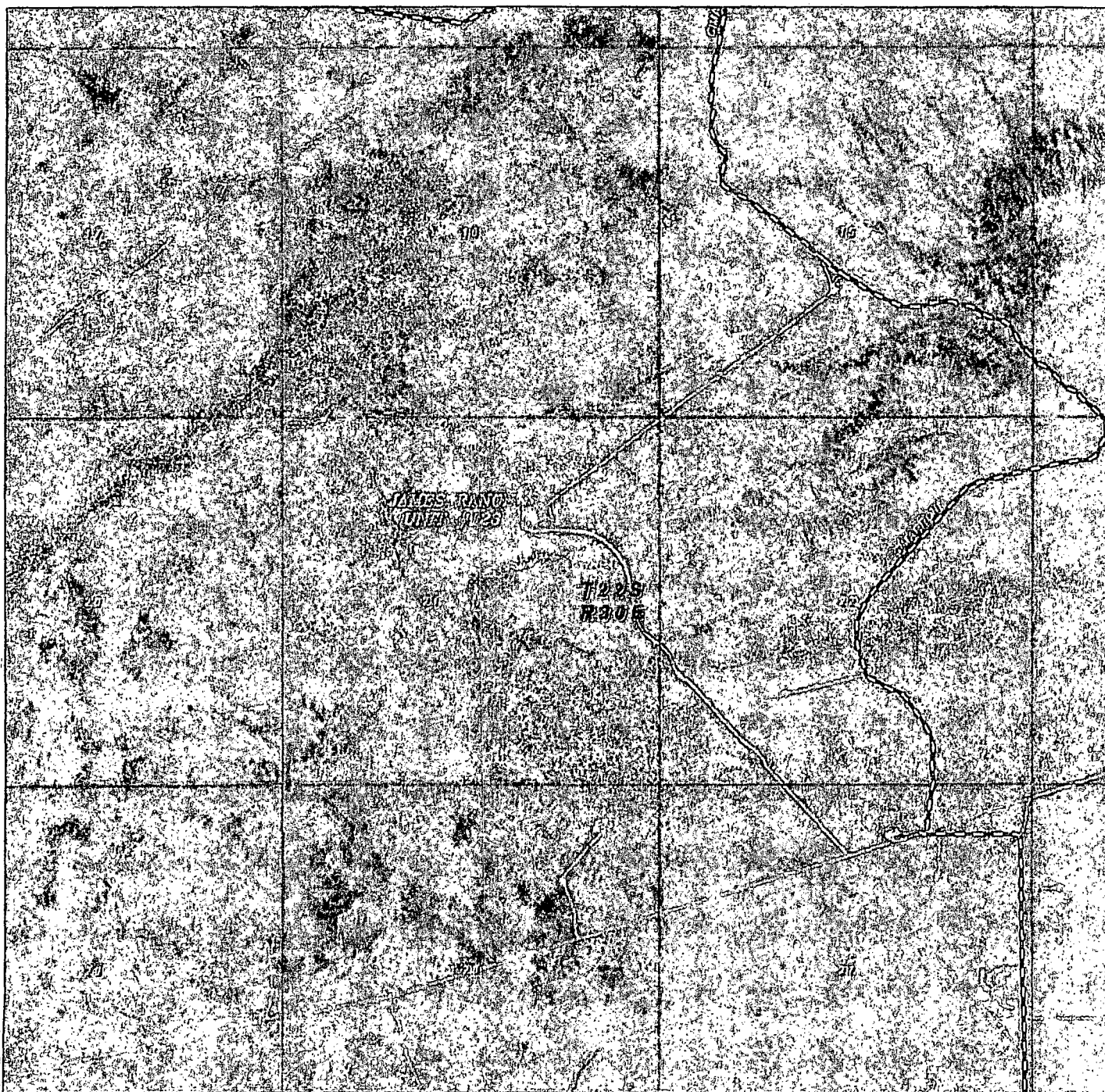
W.O. Number: JMS 28737

Survey Date: 05-16-2013

Scale: 1" = 2000'

Date: 05-16-2013

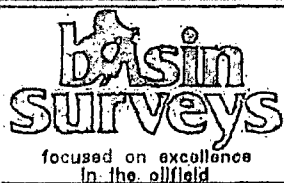
BOPCO, L.P.



JAMES RANCH UNIT #126 *H*

Located 1431' FNL and 1821' FEL

Section 21, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



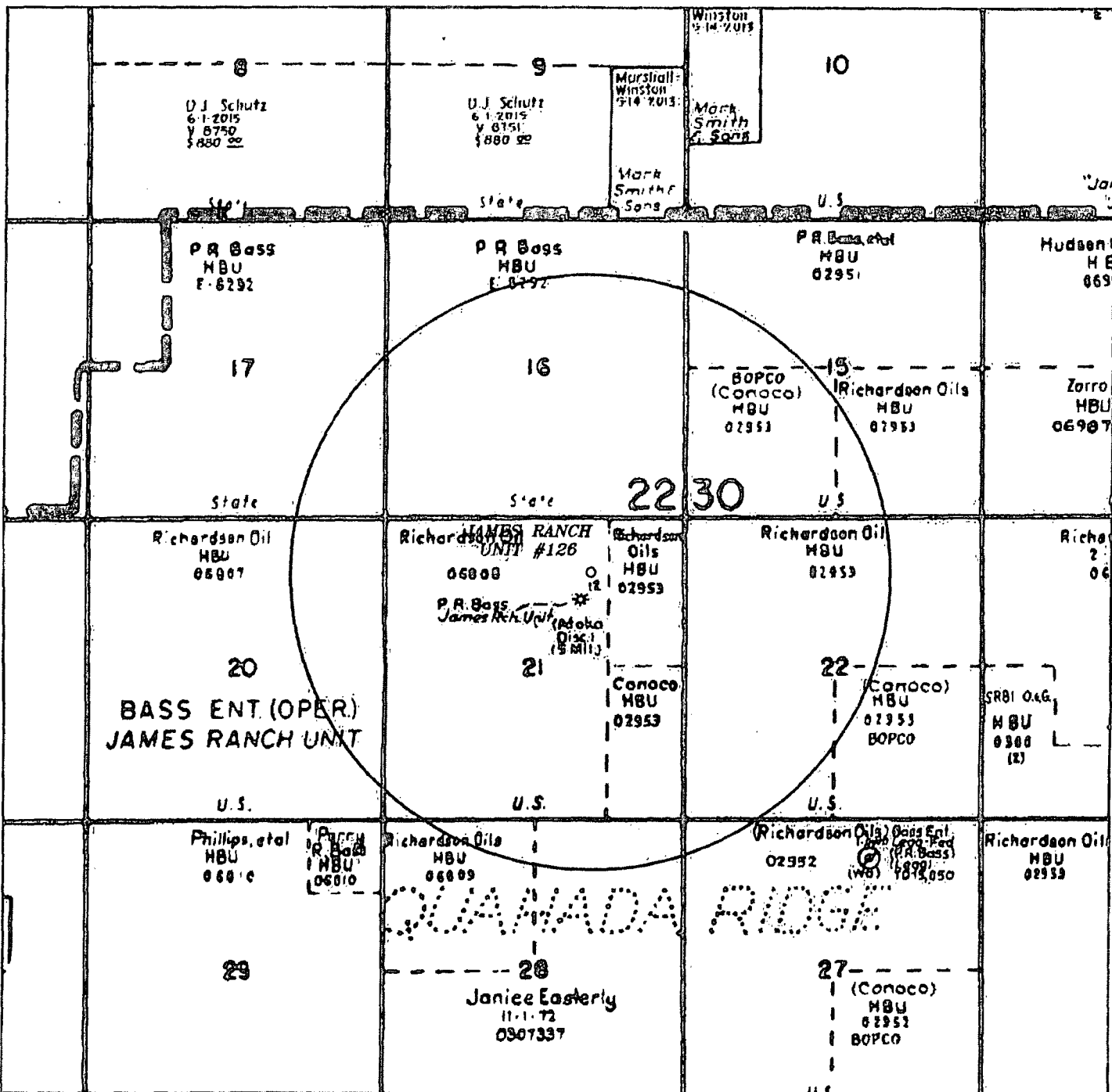
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 28737

Scale: 1" = 2000'

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

BOPCO, L.P.



JAMES RANCH UNIT #126 H

Located 1431' FNL and 1821' FEL

Section 21, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

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in the oilfield

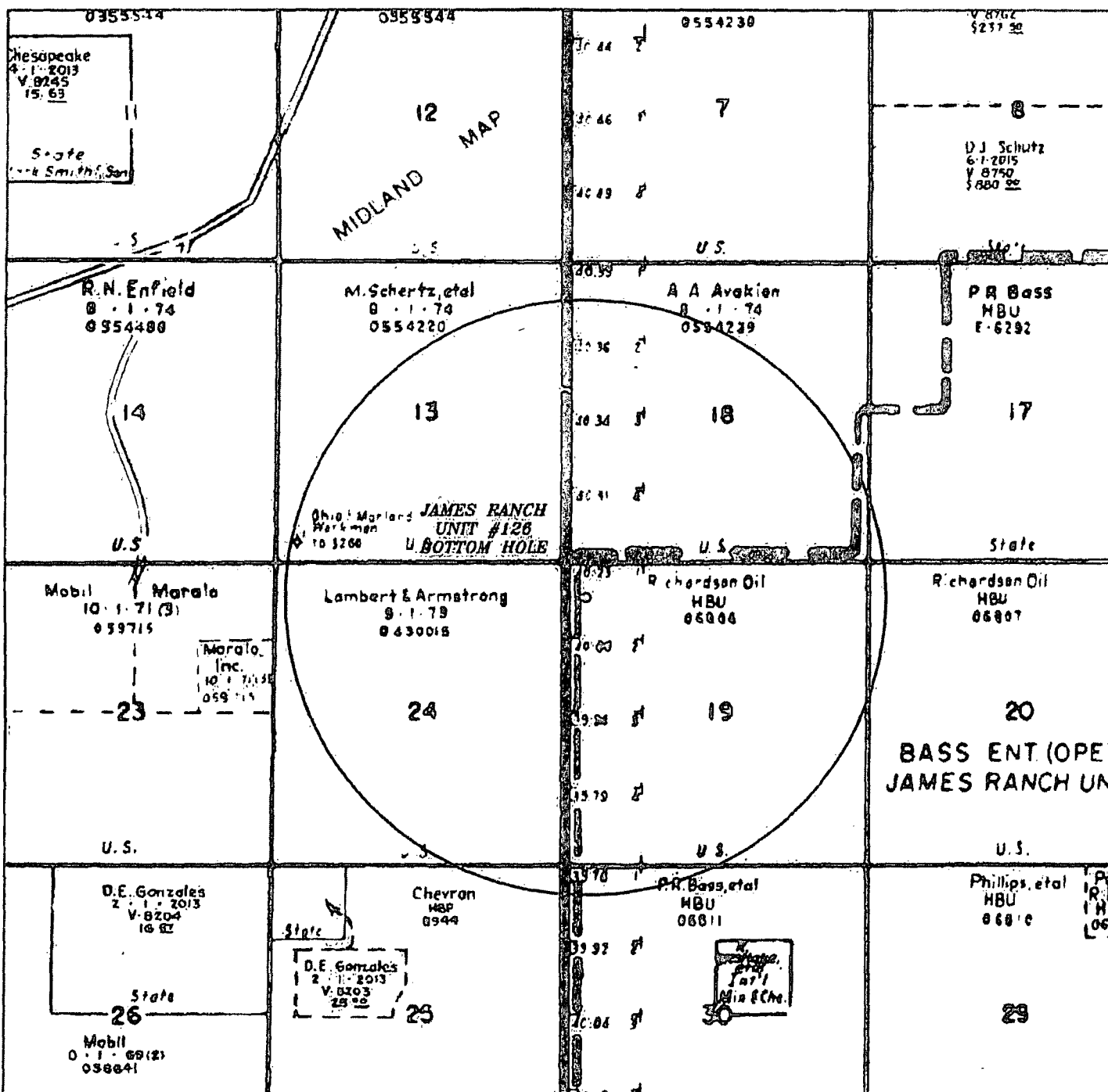
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 28737

Scale: None

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

BOPCO, L.P.



JAMES RANCH UNIT #126 H
 Located 1431' FNL and 1821' FEL
 Section 21, Township 22 South, Range 30 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
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W.O. Number: JMS 28737

Scale: None

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

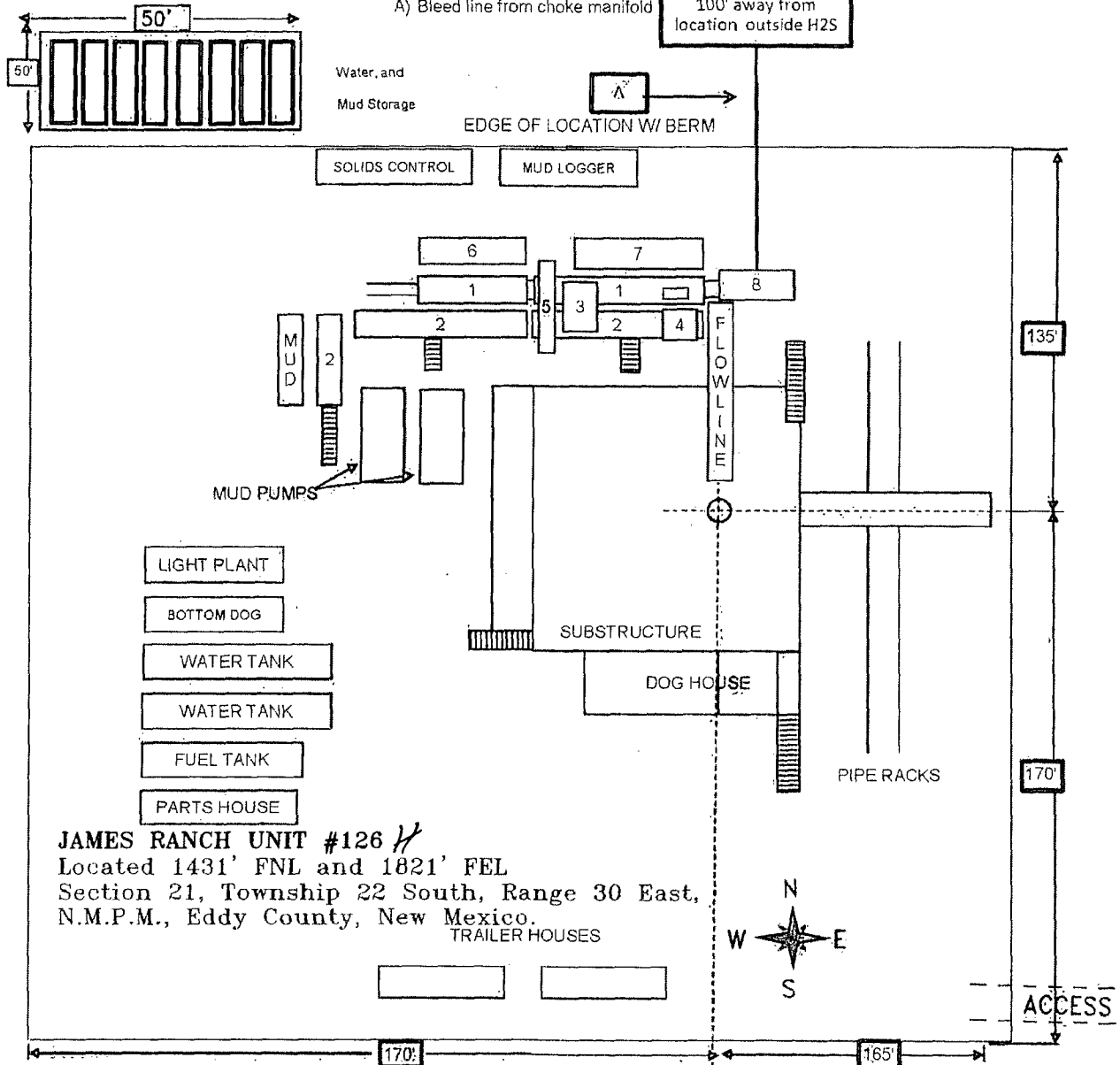
BOPCO, L.P.

Exhibit "D"

RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

- | | |
|-----------------------------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge |
| 2) Steel Tank | 6) Dewatering Unit |
| 3) Mud Cleaner | 7) Catch Tank |
| 4) Shaker | 8) Choke Manifold |
| A) Bleed line from choke manifold | |



JAMES RANCH UNIT #126
 Located 1431' FNL and 1821' FEL
 Section 21, Township 22 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

TRAILER HOUSES

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 Hobbs, New Mexico 88241
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 (575) 392-2206 - Fax
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W.O. Number: JMS 28737

Survey Date: 05-16-2013

Scale: 1" = 2000'

Date: 05-16-2013

BOPCO, L.P.

**EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.**

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

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

Anticipated Formation Tops: KB 3190' (estimated)
GL 3165'

Formation Description	Est from KB (TVD)	Est (MD)	SUB-SEA TOP	BEARING
Fresh Water	125'	125'	+ 3,065'	Barren
Rustler	190'	190'	+ 3,000'	Barren
Salado	555'	555'	+ 2,635'	Barren
B/Salt	3,282'	3,282'	- 92'	Barren
Lamar	3,535'	3,540'	- 345'	Oil/Gas
Delaware Sands	3,580'	3,585'	- 390'	Oil/Gas
Lower Brushy Canyon	7,103'	7,122'	- 3,913'	Oil/Gas
Bone Spring Lime	7,383'	7,402'	- 4,193'	Oil/Gas
1 st Bone Spring Sand	8,387'	8,410'	- 5,197'	Oil/Gas
KOP	8,513'	8,537'	- 5,323'	Oil/Gas
2 nd Bone Spring "2A" Sand	9,122'	9,318'	- 5,932'	Oil/Gas
Target 1	9,240'	9,865'	- 6,050'	Oil/Gas
TD	8,980'	22,613'	- 5,790'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVAL MD	HOLE SIZE	PURPOSE	INSTALLATION TYPE
20"	0' - 120'	30"	Conductor	Contractor Discretion
13-3/8", 48 ppf, H-40 8rd, ST&C* <i>See COR 525'</i>	0' - 540'	17-1/2"	Surface	New
9-5/8" 40 ppf, J-55, 8rd, LT&C*	0' - 3,550'	12-1/4"	Intermediate	New
7", 26 ppf, HCP-110, Buttress or 8rd LTC*	0' - 12,713'	8-3/4"	Production	New

Completion System				
4-1/2", 11.6 ppf, HCP-110, Hydril 563	12,663' - 22,613'	6-1/8"	Completion System	New

* Depending on availability.

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48 ppf, H-40, 8rd, STC*	14.45	2.80	1.13
9-5/8", 40 ppf, J-55, 8rd, LT&C*	5.28	1.26	2.00
7", 26 ppf, HCP-110, Buttress or 8rd LTC*	3.29	1.51	1.90

Completion System	TENSION	COLLAPSE	BURST
4-1/2", 11.6 ppf, HCP-110 Hydril 563	3.88	1.51	2.03

* Depending on availability.

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (13-3/8")

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.2 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 1.3 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 at 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 - (9-5/8")

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 (0.52 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. 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.

Production CASING - (7")

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 (0.48 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.

Completion System - (4-1/2")

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 (0.48 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 DIAGRAMS A, B, or C)

On this well, a Cameron MB-ND style multibowl wellhead system will be used. After running and cementing the 13-3/8" casing string, the BOP stack will be nipped up and tested to ~~3,000 psi high~~ ^{250 then 3000} and ~~250 psi low~~ ⁵⁰⁰. After this initial test, the BOP will not need to be removed for the duration of the well, as each subsequent string will utilize a mandrel packoff. The mandrel packoff and lockdown screws will be tested to the full working pressure of the system at 3,000 psi, as well as a low pressure test of 250 psi. The 13-3/8" and subsequent casing strings will be ~~pressure tested~~ ^(to 70%) as per Onshore Order #2 prior to drilling out the shoe. *See COA*

These tests will be performed:

- a) After any component changes
- b) Thirty days after a previous test
- c) As required by well conditions
- d) Any time a seal is broken within a system

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

BOPCO, L.P. would like to request a variance to use an armored, 3", 5000 psi WP flex hose for the choke line in the drilling of the well if the rig is equip with hose. (See specification for hose that might be used, attached with APD exhibits). This is rig equipment and will help quicken nipple up time thus saving money without a safety problem. The hose itself is rated to 5000 psi, and has 5000 psi flanges on each end. This well is to be drilled to 22,613' MD (8,980' TVD) and max surface pressure should be +/- 2,227 psi as prescribed in onshore order #2 shown as max BHP minus 0.22 psi/ft. Thus, a 3,000 psi BOPE is all that is needed for this well. **Please refer to diagrams A, B, or C for choke manifold and closed loop system layout. If an armored flex hose is utilized, the company man will have all of the proper certified paper work for that hose available on location.**

POINT 5: MUD PROGRAM

DEPTH		MUD TYPE	WEIGHT	EV	PV	YP	FL	Ph
0 - 540'	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0	9.5 - 10.5
540' - 3,550'	Brine Water	9.8 - 10.2	28-30	NC	NC	NC	9.5 - 10.5	9.5 - 10.5
3,550 - 12,713'	FW/Gel	8.7 - 9.0	28-36	NC	NC	NC	9.5 - 10.0	9.5 - 10.5
12,713' - 22,613'	Oil Based Mud	8.7 - 9.0	28-36	45-60	16-30	14-26	12 - 15.0	Electrical stability 500-600v

NOTE: May increase vis for logging purposes only.

MUD MONITORING SYSTEM

1. BOPCO L.P. plans to drill the proposed well with water and does not expect to mud up. In the event of abnormal pressures that require mudding up, BOPCO L.P. will record slow pump rates on the daily drilling report on a daily basis.
2. Visual mud monitoring equipment will be installed to detect volume changes.
3. Pit volume totalizers are installed on rig before spud.
4. BOPCO L.P. has the drilling mud checked every 24 hrs., and the daily mud check will be posted in the company man's trailer.
5. BOPCO L.P. will be using a 3M system so trip tanks will not be required per Onshore order #2.
6. Gas detections systems will be installed on exploratory wells per Onshore order #2. Please refer to section G under point 6 in the 8pt drilling program for H2S safety information.

Sufficient mud materials will be kept at the well site to maintain mud properties and meet minimum lost circulation and weight increase requirements at all times (sack or bulk barite will not be on location until 500' above the top of the wolfcamp.)

BOPCO, L.P. will have auxiliary equipment in place and a 24 hour mud engineer to minimize the risk of an OBM spill. In the event of a spill while drilling with OBM, BOPCO, L.P. has a spill contingency plan that is attached.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING
None anticipated.

B) LOGGING

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 SX
SURFACE: Lead: 0' – 240'	200	240	Class C +2% CACL + 4% Bentonite + 0.25 LB/SK Cello Flake + 3 lb/sk LCM-1	8.69	13.50	1.75
Tail: 240' – 540' <i>525</i>	340	300	Class C + 2% CACL + 0.25 LB/SK CF	6.35	14.80	1.35
INTERMEDIATE: Lead: 0' – 3,050'	680	3050	0.25LB/SK Cello Flake + 3 lb/sk LCM-1 EconoCEM HLC + 5% CaCl + 5#/sk Gilsonite	9.32	12.90	1.85
Tail: 3,050' – 3,550'	190	500	HalCem C	6.34	14.80	1.33
Production Stage 1: Lead: 5,000' – 8,537'	310	3537	Tuned Light + 0.125 pps Poly-E- Flake	14.87	11.0	2.64
Tail: 8,537' – 12,173'	410	3636	Class "H" + 0.5% Halad-344 + 0.25% CFR-3 + 0.5% Econolite	11.41	12.00	2.03
DV Tool @ 5,000' Stage 2: Lead: 0' – 5,000'	410	5000	Tuned Light + 0.125 pps Poly-E- Flake	11.70	11.0	2.35

Cement excesses will be as follows:

Surface – 100% excess over gauge hole with cement circulated to surface: *c/c 84%*

1st Intermediate – 30% excess above fluid caliper with cement circulated to surface.

R *M* Production – 50% above gauge hole or 30% 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) COMPLETIONS SYSTEM

BOPCO, L.P. plans to plug and perforate the 7" casing. The top perforation will be located inside of the producing interval. A 4-1/2" completion system with open hole packers will be run in the producing lateral to a depth of 22,613'. The top of the Completion System will be set at approximately 12,663'. Cement will not be required for this system.

F) 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 8,537' at which point a directional hole will be kicked off and drilled at an azimuth of 330.00 degrees, building azimuth to 270.04 while building angle at 5.02 deg/100' to a TVD of 9,240' (MD 9,865'). Drilling will continue at this azimuth while building angle at 91.16 degrees to 12,713' MD (9,181' TVD). At this point 7", 26 ppf, HCP-110, 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 270.04 degrees, inclination of 91.69 degrees to a measured depth of 22,613', TVD 8,980'. At this depth a 4-1/2" Completion System with packers installed for zone isolation will be run into the producing lateral.

G) H₂S SAFETY EQUIPMENT

H₂S monitors shall be installed prior to drilling out the surface shoe. If H₂S is encountered in quantities greater than 10 PPM, the well will be shut in and H₂S equipment will be installed, including a flare line that will be extended pursuant to onshore oil and gas order #6. **(Please refer to diagram B or C for choke manifold and closed loop system layout when H₂S is present) Please refer to H₂S location diagram for location of important H₂S safety items.**

H) CLOSED LOOP AND CHOKE MANIFOLD

Please see diagram A, B or C depending on configuration.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout the Delaware and Bone Spring sections. A BHP of 4329 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware and Bone Spring section from 3,540'-9,250' 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

30 days drilling operations

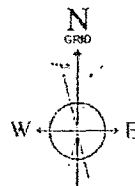
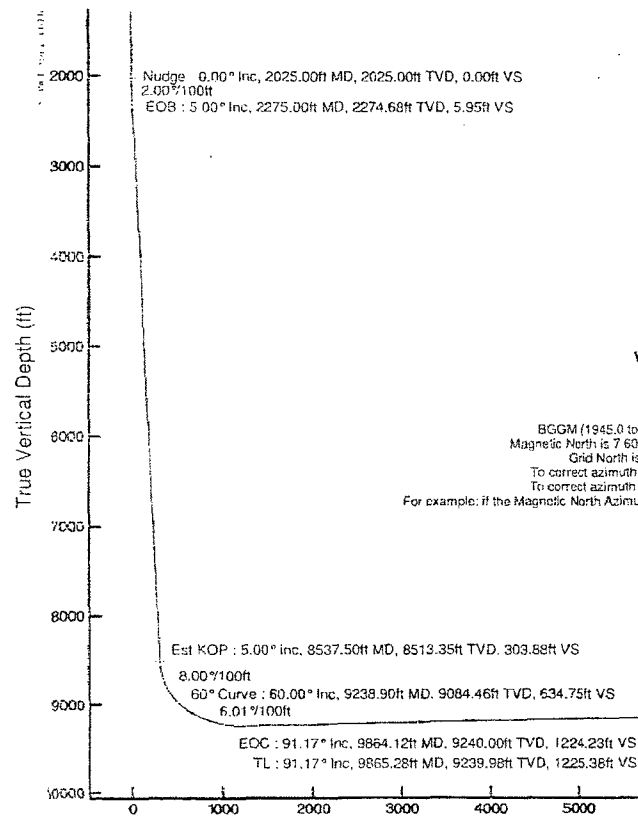
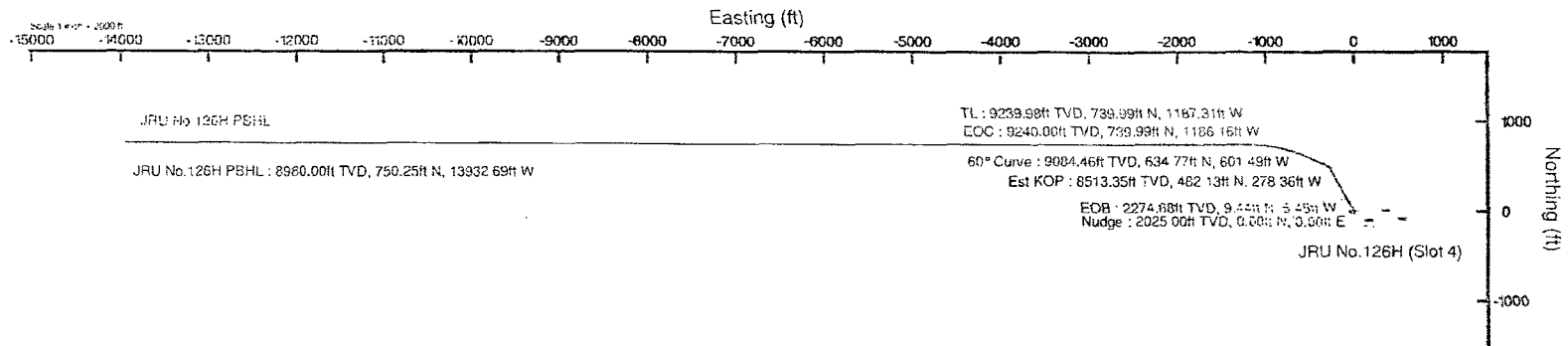
14 days completion operations



BOPCO, L.P.

Location: Eddy County, NM
Field: JRU NAD27
Facility: JRU Pad

Slot: JRU No.126H (Slot 4)
Well: No.126H (Slot 4)
Wellbore: No.126H PWB (Slot 4)



BGGM (1945.0 to 2015.0) Dip: 60.22° Field: 48464.4 nT
Magnetic North is 7.60 degrees East of True North (at 06/25/2013)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.36 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 - 7.36 = 97.36

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	25.00	0.000	330.000	25.00	0.00	0.00	0.00	0.00
Nudge	2025.00	0.000	330.000	2025.00	0.00	0.00	0.00	0.00
EOB	2275.00	5.000	330.000	2274.68	9.44	-5.45	2.00	5.95
Est KOP	8537.50	5.000	330.000	8513.35	482.13	-278.36	0.00	303.88
60° Curve	9239.90	60.000	292.000	9084.46	634.77	-601.49	0.00	634.75
EOC	9864.12	91.169	270.000	9240.00	739.99	-1186.16	6.01	1224.23
TL	9865.28	91.169	270.046	9239.98	739.99	-1187.31	4.00	1225.38
JRU No 126H PBHL	22613.31	91.169	270.046	8980.00	750.25	-13932.69	0.00	13952.87

Well Reference Data	
True Vertical Depth (TVD) is referenced to Mean Sea Level (MSL) in ft.	Grid System: NAD27 / TM New Mexico SP - Eastern Zone (3001), US feet
Measured depths are referenced to Rig on Deck (ROD) in ft.	North Reference: Grid North
As shown on the 500 ft. Borehole Log Scale (1:2000) Inc.	Scale: True Vertical
Mean Sea Level to Mudline (MSL) for JRU No 126H (Slot 4) is 0 feet	Depth: as measured
Coordinates are in feet referenced to Slat	Checked by: geology on 06/25/2013

Azimuth 273.08° with reference 0.00 N, 0.00 E

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Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

PROJECTION 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	0.999931	Report Generated	06/25/2013 at 10:33:11 AM
Convergence at slot	0.24° East	Database/Source file	WA Midland/No.126H_PWB_Slot_4.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	19.50	-0.18	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W
Facility Reference Pt			639020.08	502555.10	32°22'51.004"N	103°52'58.816"W
Field Reference Pt			652495.44	494904.92	32°21'34.711"N	103°50'22.090"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.4H SHL (KB) to Facility Vertical Datum	3190.00ft
Horizontal Reference Pt	Slot	Rig on No.4H SHL (KB) to Mean Sea Level	3190.00ft
Vertical Reference Pt	Rig on No.4H SHL (KB)	Rig on No.4H SHL (KB) to Mud Line at Slot (JRU No.126H (Slot 4))	3190.00ft
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	273.08°



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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

WELLPATH DATA (242 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	330.000	0.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
25.00†	0.000	330.000	25.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	tie On
125.00†	0.000	330.000	125.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
190.00†	0.000	330.000	190.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	Rustler
225.00†	0.000	330.000	225.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
325.00†	0.000	330.000	325.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
425.00†	0.000	330.000	425.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
525.00†	0.000	330.000	525.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
555.00†	0.000	330.000	555.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	Salado
625.00†	0.000	330.000	625.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
725.00†	0.000	330.000	725.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
825.00†	0.000	330.000	825.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
925.00†	0.000	330.000	925.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1025.00†	0.000	330.000	1025.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1125.00†	0.000	330.000	1125.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1225.00†	0.000	330.000	1225.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1325.00†	0.000	330.000	1325.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1425.00†	0.000	330.000	1425.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1525.00†	0.000	330.000	1525.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1625.00†	0.000	330.000	1625.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1725.00†	0.000	330.000	1725.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1825.00†	0.000	330.000	1825.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
1925.00†	0.000	330.000	1925.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	
2025.00†	0.000	330.000	2025.00	0.00	0.00	0.00	639019.90	502574.60	32°22'51.197"N	103°52'58.817"W	0.00	Nudge
2125.00†	2.000	330.000	2124.98	0.95	1.51	-0.87	639019.03	502576.11	32°22'51.212"N	103°52'58.828"W	2.00	
2225.00†	4.000	330.000	2224.84	3.81	6.04	-3.49	639016.41	502580.64	32°22'51.257"N	103°52'58.858"W	2.00	
2275.00	5.000	330.000	2274.68	5.95	9.44	-5.45	639014.45	502584.04	32°22'51.291"N	103°52'58.881"W	2.00	EOB
2325.00†	5.000	330.000	2324.49	8.33	13.21	-7.63	639012.27	502587.81	32°22'51.328"N	103°52'58.906"W	0.00	
2425.00†	5.000	330.000	2424.11	13.09	20.76	-11.99	639007.91	502595.36	32°22'51.403"N	103°52'58.956"W	0.00	
2525.00†	5.000	330.000	2523.73	17.84	28.31	-16.35	639003.56	502602.91	32°22'51.478"N	103°52'59.007"W	0.00	
2625.00†	5.000	330.000	2623.35	22.60	35.86	-20.70	638999.20	502610.46	32°22'51.553"N	103°52'59.057"W	0.00	
2725.00†	5.000	330.000	2722.97	27.36	43.41	-25.06	638994.84	502618.00	32°22'51.628"N	103°52'59.108"W	0.00	
2825.00†	5.000	330.000	2822.59	32.12	50.95	-29.42	638990.48	502625.55	32°22'51.703"N	103°52'59.158"W	0.00	
2925.00†	5.000	330.000	2922.21	36.87	58.50	-33.78	638986.13	502633.10	32°22'51.777"N	103°52'59.208"W	0.00	
3025.00†	5.000	330.000	3021.83	41.63	66.05	-38.13	638981.77	502640.65	32°22'51.852"N	103°52'59.259"W	0.00	
3125.00†	5.000	330.000	3121.45	46.39	73.60	-42.49	638977.41	502648.19	32°22'51.927"N	103°52'59.309"W	0.00	
3225.00†	5.000	330.000	3221.07	51.15	81.15	-46.85	638973.05	502655.74	32°22'52.002"N	103°52'59.360"W	0.00	
3325.00†	5.000	330.000	3320.69	55.90	88.69	-51.21	638968.70	502663.29	32°22'52.077"N	103°52'59.410"W	0.00	
3425.00†	5.000	330.000	3420.31	60.66	96.24	-55.57	638964.34	502670.84	32°22'52.152"N	103°52'59.461"W	0.00	
3525.00†	5.000	330.000	3519.93	65.42	103.79	-59.92	638959.98	502678.38	32°22'52.227"N	103°52'59.511"W	0.00	
3540.13†	5.000	330.000	3535.00	66.14	104.93	-60.58	638959.32	502679.52	32°22'52.238"N	103°52'59.519"W	0.00	Lamar
3585.30†	5.000	330.000	3580.00	68.29	108.34	-62.55	638957.35	502682.93	32°22'52.272"N	103°52'59.542"W	0.00	Delaware Sands
3625.00†	5.000	330.000	3619.55	70.17	111.34	-64.28	638955.62	502685.93	32°22'52.302"N	103°52'59.562"W	0.00	
3725.00†	5.000	330.000	3719.17	74.93	118.89	-68.64	638951.27	502693.48	32°22'52.376"N	103°52'59.612"W	0.00	
3825.00†	5.000	330.000	3818.78	79.69	126.43	-73.00	638946.91	502701.02	32°22'52.451"N	103°52'59.662"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

WELLPATH DATA (242 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Seet [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3925.00†	5.000	330.000	3918.40	84.45	133.98	-77.35	638942.55	502708.57	32°22'52.526"N	103°52'59.713"W	0.00	
4025.00†	5.000	330.000	4018.02	89.20	141.53	-81.71	638938.19	502716.12	32°22'52.601"N	103°52'59.763"W	0.00	
4125.00†	5.000	330.000	4117.64	93.96	149.08	-86.07	638933.84	502723.67	32°22'52.676"N	103°52'59.814"W	0.00	
4225.00†	5.000	330.000	4217.26	98.72	156.63	-90.43	638929.48	502731.21	32°22'52.751"N	103°52'59.864"W	0.00	
4325.00†	5.000	330.000	4316.88	103.48	164.17	-94.79	638925.12	502738.76	32°22'52.826"N	103°52'59.915"W	0.00	
4425.00†	5.000	330.000	4416.50	108.23	171.72	-99.14	638920.76	502746.31	32°22'52.901"N	103°52'59.965"W	0.00	
4525.00†	5.000	330.000	4516.12	112.99	179.27	-103.50	638916.41	502753.86	32°22'52.975"N	103°53'00.016"W	0.00	
4625.00†	5.000	330.000	4615.74	117.75	186.82	-107.86	638912.05	502761.40	32°22'53.050"N	103°53'00.066"W	0.00	
4725.00†	5.000	330.000	4715.36	122.51	194.36	-112.22	638907.69	502768.95	32°22'53.125"N	103°53'00.116"W	0.00	
4825.00†	5.000	330.000	4814.98	127.26	201.91	-116.57	638903.33	502776.50	32°22'53.200"N	103°53'00.167"W	0.00	
4925.00†	5.000	330.000	4914.60	132.02	209.46	-120.93	638898.98	502784.05	32°22'53.275"N	103°53'00.217"W	0.00	
5025.00†	5.000	330.000	5014.22	136.78	217.01	-125.29	638894.62	502791.59	32°22'53.350"N	103°53'00.268"W	0.00	
5125.00†	5.000	330.000	5113.84	141.53	224.56	-129.65	638890.26	502799.14	32°22'53.425"N	103°53'00.318"W	0.00	
5225.00†	5.000	330.000	5213.46	146.29	232.10	-134.01	638885.90	502806.69	32°22'53.499"N	103°53'00.369"W	0.00	
5325.00†	5.000	330.000	5313.08	151.05	239.65	-138.36	638881.55	502814.24	32°22'53.574"N	103°53'00.419"W	0.00	
5425.00†	5.000	330.000	5412.70	155.81	247.20	-142.72	638877.19	502821.78	32°22'53.649"N	103°53'00.470"W	0.00	
5525.00†	5.000	330.000	5512.32	160.56	254.75	-147.08	638872.83	502829.33	32°22'53.724"N	103°53'00.520"W	0.00	
5625.00†	5.000	330.000	5611.94	165.32	262.30	-151.44	638868.47	502836.88	32°22'53.799"N	103°53'00.570"W	0.00	
5725.00†	5.000	330.000	5711.55	170.08	269.84	-155.79	638864.12	502844.42	32°22'53.874"N	103°53'00.621"W	0.00	
5825.00†	5.000	330.000	5811.17	174.84	277.39	-160.15	638859.76	502851.97	32°22'53.949"N	103°53'00.671"W	0.00	
5925.00†	5.000	330.000	5910.79	179.59	284.94	-164.51	638855.40	502859.52	32°22'54.024"N	103°53'00.722"W	0.00	
6025.00†	5.000	330.000	6010.41	184.35	292.49	-168.87	638851.04	502867.07	32°22'54.098"N	103°53'00.772"W	0.00	
6125.00†	5.000	330.000	6110.03	189.11	300.04	-173.23	638846.69	502874.61	32°22'54.173"N	103°53'00.823"W	0.00	
6225.00†	5.000	330.000	6209.65	193.87	307.58	-177.58	638842.33	502882.16	32°22'54.248"N	103°53'00.873"W	0.00	
6325.00†	5.000	330.000	6309.27	198.62	315.13	-181.94	638837.97	502889.71	32°22'54.323"N	103°53'00.924"W	0.00	
6425.00†	5.000	330.000	6408.89	203.38	322.68	-186.30	638833.61	502897.26	32°22'54.398"N	103°53'00.974"W	0.00	
6525.00†	5.000	330.000	6508.51	208.14	330.23	-190.66	638829.26	502904.80	32°22'54.473"N	103°53'01.024"W	0.00	
6625.00†	5.000	330.000	6608.13	212.89	337.77	-195.01	638824.90	502912.35	32°22'54.548"N	103°53'01.075"W	0.00	
6725.00†	5.000	330.000	6707.75	217.65	345.32	-199.37	638820.54	502919.90	32°22'54.622"N	103°53'01.125"W	0.00	
6825.00†	5.000	330.000	6807.37	222.41	352.87	-203.73	638816.18	502927.45	32°22'54.697"N	103°53'01.176"W	0.00	
6925.00†	5.000	330.000	6906.99	227.17	360.42	-208.09	638811.83	502934.99	32°22'54.772"N	103°53'01.226"W	0.00	
7025.00†	5.000	330.000	7006.61	231.92	367.97	-212.45	638807.47	502942.54	32°22'54.847"N	103°53'01.277"W	0.00	
7121.76†	5.000	330.000	7103.00	236.53	375.27	-216.66	638803.25	502949.84	32°22'54.920"N	103°53'01.325"W	0.00	Lower Brushy Canyon
7125.00†	5.000	330.000	7106.23	236.68	375.51	-216.80	638803.11	502950.09	32°22'54.922"N	103°53'01.327"W	0.00	
7225.00†	5.000	330.000	7205.85	241.44	383.06	-221.16	638798.75	502957.64	32°22'54.997"N	103°53'01.378"W	0.00	
7325.00†	5.000	330.000	7305.47	246.20	390.61	-225.52	638794.40	502965.18	32°22'55.072"N	103°53'01.428"W	0.00	
7402.83†	5.000	330.000	7383.00	249.90	396.48	-228.91	638791.01	502971.06	32°22'55.130"N	103°53'01.467"W	0.00	Bone Spring Line
7425.00†	5.000	330.000	7405.09	250.95	398.16	-229.88	638790.04	502972.73	32°22'55.147"N	103°53'01.478"W	0.00	
7525.00†	5.000	330.000	7504.70	255.71	405.71	-234.23	638785.68	502980.28	32°22'55.221"N	103°53'01.529"W	0.00	
7625.00†	5.000	330.000	7604.32	260.47	413.25	-238.59	638781.52	502987.82	32°22'55.296"N	103°53'01.579"W	0.00	
7725.00†	5.000	330.000	7703.94	265.23	420.80	-242.95	638776.97	502995.37	32°22'55.371"N	103°53'01.630"W	0.00	
7825.00†	5.000	330.000	7803.56	269.98	428.35	-247.31	638772.61	503002.92	32°22'55.446"N	103°53'01.680"W	0.00	
7925.00†	5.000	330.000	7903.18	274.74	435.90	-251.67	638768.25	503010.47	32°22'55.521"N	103°53'01.731"W	0.00	
8025.00†	5.000	330.000	8002.80	279.50	443.45	-256.02	638763.89	503018.01	32°22'55.596"N	103°53'01.781"W	0.00	
8125.00†	5.000	330.000	8102.42	284.25	450.99	-260.38	638759.54	503025.56	32°22'55.671"N	103°53'01.832"W	0.00	



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RELATIONSHIP IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

WELLPATH DATA (242 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
8225.00†	5.000	330.000	8202.04	289.01	458.54	-264.74	638755.18	503033.11	32°22'55.746"N	103°53'01.882"W	0.00	
8325.00†	5.000	330.000	8301.66	293.77	466.09	-269.10	638750.82	503040.66	32°22'55.820"N	103°53'01.932"W	0.00	
8410.67†	5.000	330.000	8387.00	297.84	472.56	-272.83	638747.09	503047.12	32°22'55.885"N	103°53'01.976"W	0.00	Bone Spring 1 Sand
8425.00†	5.000	330.000	8401.28	298.53	473.64	-273.45	638746.46	503048.20	32°22'55.895"N	103°53'01.983"W	0.00	
8525.00†	5.000	330.000	8500.90	303.28	481.19	-277.81	638742.11	503055.75	32°22'55.970"N	103°53'02.033"W	0.00	
8537.50	5.000	330.000	8513.35	303.88	482.13	-278.36	638741.56	503056.69	32°22'55.979"N	103°53'02.040"W	0.00	Est KOP
8625.00†	11.296	306.446	8599.95	313.13	490.53	-287.17	638732.75	503065.10	32°22'56.063"N	103°53'02.142"W	8.00	
8725.00†	19.098	299.464	8696.38	336.00	504.42	-309.33	638710.60	503078.98	32°22'56.201"N	103°53'02.400"W	8.00	
8825.00†	27.013	296.459	8788.32	371.56	522.61	-343.96	638675.97	503097.18	32°22'56.383"N	103°53'02.803"W	8.00	
8925.00†	34.965	294.744	8873.98	419.11	544.76	-390.39	638629.54	503119.32	32°22'56.604"N	103°53'03.343"W	8.00	
9025.00†	42.933	293.600	8951.69	477.74	570.43	-447.71	638572.22	503144.99	32°22'56.860"N	103°53'04.010"W	8.00	
9125.00†	50.909	292.756	9019.94	546.29	599.12	-514.82	638505.12	503173.68	32°22'57.147"N	103°53'04.791"W	8.00	
9225.00†	58.891	292.084	9077.39	623.43	630.28	-590.39	638429.55	503204.84	32°22'57.458"N	103°53'05.671"W	8.00	
9238.90	60.000	292.000	9084.46	634.75	634.77	-601.49	638418.46	503209.33	32°22'57.503"N	103°53'05.800"W	8.00	60° Curve
9318.63†	63.821	288.723	9122.00	701.90	659.20	-667.42	638352.53	503233.76	32°22'57.748"N	103°53'06.568"W	6.01	Bone Spring 2 A Sand
9325.00†	64.130	288.470	9124.80	707.42	661.03	-672.85	638347.10	503235.58	32°22'57.766"N	103°53'06.631"W	6.01	
9425.00†	69.025	284.670	9164.55	796.61	687.13	-760.76	638259.19	503261.68	32°22'58.028"N	103°53'07.655"W	6.01	
9525.00†	73.999	281.113	9196.26	890.02	708.24	-853.17	638166.79	503282.79	32°22'58.241"N	103°53'08.731"W	6.01	
9625.00†	79.028	277.730	9219.58	986.63	724.12	-949.06	638070.90	503298.67	32°22'58.402"N	103°53'09.849"W	6.01	
9725.00†	84.094	274.461	9234.25	1085.36	734.60	-1047.38	637972.60	503309.14	32°22'58.510"N	103°53'10.995"W	6.01	
9825.00†	89.178	271.251	9240.12	1185.14	739.56	-1147.04	637872.94	503314.11	32°22'58.563"N	103°53'12.156"W	6.01	
9864.12	91.169	270.000	9240.00	1224.23	739.99	-1186.16	637833.83	503314.53	32°22'58.569"N	103°53'12.612"W	6.01	EOC
9865.28	91.169	270.046	9239.98	1225.38	739.99	-1187.31	637832.67	503314.54	32°22'58.569"N	103°53'12.626"W	4.00	TL
9925.00†	91.169	270.046	9238.76	1285.01	740.04	-1247.02	637772.97	503314.58	32°22'58.572"N	103°53'13.322"W	0.00	
10025.00†	91.169	270.046	9236.72	1384.85	740.12	-1347.00	637673.00	503314.66	32°22'58.577"N	103°53'14.488"W	0.00	
10125.00†	91.169	270.046	9234.68	1484.68	740.20	-1446.98	637573.03	503314.74	32°22'58.581"N	103°53'15.654"W	0.00	
10225.00†	91.169	270.046	9232.64	1584.52	740.28	-1546.96	637473.05	503314.82	32°22'58.586"N	103°53'16.820"W	0.00	
10325.00†	91.169	270.046	9230.60	1684.36	740.36	-1646.94	637373.08	503314.91	32°22'58.591"N	103°53'17.985"W	0.00	
10425.00†	91.169	270.046	9228.56	1784.20	740.44	-1746.91	637273.11	503314.99	32°22'58.596"N	103°53'19.151"W	0.00	
10525.00†	91.169	270.046	9226.52	1884.04	740.52	-1846.89	637173.14	503315.07	32°22'58.601"N	103°53'20.317"W	0.00	
10625.00†	91.169	270.046	9224.48	1983.88	740.60	-1946.87	637073.16	503315.15	32°22'58.606"N	103°53'21.483"W	0.00	
10725.00†	91.169	270.046	9222.44	2083.72	740.68	-2046.85	636973.19	503315.23	32°22'58.611"N	103°53'22.649"W	0.00	
10825.00†	91.169	270.046	9220.40	2183.56	740.76	-2146.83	636873.22	503315.31	32°22'58.616"N	103°53'23.815"W	0.00	
10925.00†	91.169	270.046	9218.37	2283.40	740.84	-2246.81	636773.25	503315.39	32°22'58.621"N	103°53'24.980"W	0.00	
11025.00†	91.169	270.046	9216.33	2383.23	740.92	-2346.79	636673.28	503315.47	32°22'58.626"N	103°53'26.146"W	0.00	
11125.00†	91.169	270.046	9214.29	2483.07	741.00	-2446.77	636573.30	503315.55	32°22'58.631"N	103°53'27.312"W	0.00	
11225.00†	91.169	270.046	9212.25	2582.91	741.08	-2546.75	636473.33	503315.63	32°22'58.635"N	103°53'28.478"W	0.00	
11325.00†	91.169	270.046	9210.21	2682.75	741.16	-2646.73	636373.36	503315.71	32°22'58.640"N	103°53'29.644"W	0.00	
11425.00†	91.169	270.046	9208.17	2782.59	741.24	-2746.71	636273.39	503315.79	32°22'58.645"N	103°53'30.809"W	0.00	
11525.00†	91.169	270.046	9206.13	2882.43	741.32	-2846.69	636173.42	503315.87	32°22'58.650"N	103°53'31.975"W	0.00	
11625.00†	91.169	270.046	9204.09	2982.27	741.40	-2946.66	636073.44	503315.95	32°22'58.655"N	103°53'33.141"W	0.00	
11725.00†	91.169	270.046	9202.05	3082.11	741.49	-3046.64	635973.47	503316.03	32°22'58.660"N	103°53'34.307"W	0.00	
11825.00†	91.169	270.046	9200.01	3181.95	741.57	-3146.62	635873.50	503316.11	32°22'58.665"N	103°53'35.473"W	0.00	
11925.00†	91.169	270.046	9197.97	3281.78	741.65	-3246.60	635773.53	503316.19	32°22'58.670"N	103°53'36.639"W	0.00	
12025.00†	91.169	270.046	9195.93	3381.62	741.73	-3346.58	635673.56	503316.27	32°22'58.674"N	103°53'37.804"W	0.00	



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WELL IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

WELLPATH DATA (242 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
12125.00†	91.169	270.046	9193.89	3481.46	741.81	-3446.56	635573.58	503316.35	32°22'58.679"N	103°53'38.970"W	0.00	
12225.00†	91.169	270.046	9191.85	3581.30	741.89	-3546.54	635473.61	503316.44	32°22'58.684"N	103°53'40.136"W	0.00	
12325.00†	91.169	270.046	9189.81	3681.14	741.97	-3646.52	635373.64	503316.52	32°22'58.689"N	103°53'41.302"W	0.00	
12425.00†	91.169	270.046	9187.77	3780.98	742.05	-3746.50	635273.67	503316.60	32°22'58.694"N	103°53'42.468"W	0.00	
12525.00†	91.169	270.046	9185.74	3880.82	742.13	-3846.48	635173.70	503316.68	32°22'58.699"N	103°53'43.633"W	0.00	
12625.00†	91.169	270.046	9183.70	3980.66	742.21	-3946.46	635073.72	503316.76	32°22'58.703"N	103°53'44.799"W	0.00	
12725.00†	91.169	270.046	9181.66	4080.49	742.29	-4046.44	634973.75	503316.84	32°22'58.708"N	103°53'45.965"W	0.00	
12825.00†	91.169	270.046	9179.62	4180.33	742.37	-4146.41	634873.78	503316.92	32°22'58.713"N	103°53'47.131"W	0.00	
12925.00†	91.169	270.046	9177.58	4280.17	742.45	-4246.39	634773.81	503317.00	32°22'58.718"N	103°53'48.297"W	0.00	
13025.00†	91.169	270.046	9175.54	4380.01	742.53	-4346.37	634673.83	503317.08	32°22'58.723"N	103°53'49.463"W	0.00	
13125.00†	91.169	270.046	9173.50	4479.85	742.61	-4446.35	634573.86	503317.16	32°22'58.728"N	103°53'50.628"W	0.00	
13225.00†	91.169	270.046	9171.46	4579.69	742.69	-4546.33	634473.89	503317.24	32°22'58.733"N	103°53'51.794"W	0.00	
13325.00†	91.169	270.046	9169.42	4679.53	742.77	-4646.31	634373.92	503317.32	32°22'58.737"N	103°53'52.960"W	0.00	
13425.00†	91.169	270.046	9167.38	4779.37	742.85	-4746.29	634273.95	503317.40	32°22'58.742"N	103°53'54.126"W	0.00	
13525.00†	91.169	270.046	9165.34	4879.21	742.93	-4846.27	634173.97	503317.48	32°22'58.747"N	103°53'55.292"W	0.00	
13625.00†	91.169	270.046	9163.30	4979.04	743.02	-4946.25	634074.00	503317.56	32°22'58.752"N	103°53'56.458"W	0.00	
13725.00†	91.169	270.046	9161.26	5078.88	743.10	-5046.23	633974.03	503317.64	32°22'58.757"N	103°53'57.623"W	0.00	
13825.00†	91.169	270.046	9159.22	5178.72	743.18	-5146.21	633874.06	503317.72	32°22'58.761"N	103°53'58.789"W	0.00	
13925.00†	91.169	270.046	9157.18	5278.56	743.26	-5246.19	633774.09	503317.80	32°22'58.766"N	103°53'59.955"W	0.00	
14025.00†	91.169	270.046	9155.15	5378.40	743.34	-5346.16	633674.11	503317.88	32°22'58.771"N	103°54'01.121"W	0.00	
14125.00†	91.169	270.046	9153.11	5478.24	743.42	-5446.14	633574.14	503317.97	32°22'58.776"N	103°54'02.287"W	0.00	
14225.00†	91.169	270.046	9151.07	5578.08	743.50	-5546.12	633474.17	503318.05	32°22'58.781"N	103°54'03.452"W	0.00	
14325.00†	91.169	270.046	9149.03	5677.92	743.58	-5646.10	633374.20	503318.13	32°22'58.785"N	103°54'04.618"W	0.00	
14425.00†	91.169	270.046	9146.99	5777.76	743.66	-5746.08	633274.23	503318.21	32°22'58.790"N	103°54'05.784"W	0.00	
14525.00†	91.169	270.046	9144.95	5877.59	743.74	-5846.06	633174.25	503318.29	32°22'58.795"N	103°54'06.950"W	0.00	
14625.00†	91.169	270.046	9142.91	5977.43	743.82	-5946.04	633074.28	503318.37	32°22'58.800"N	103°54'08.116"W	0.00	
14725.00†	91.169	270.046	9140.87	6077.27	743.90	-6046.02	632974.31	503318.45	32°22'58.805"N	103°54'09.282"W	0.00	
14825.00†	91.169	270.046	9138.83	6177.11	743.98	-6146.00	632874.34	503318.53	32°22'58.809"N	103°54'10.447"W	0.00	
14925.00†	91.169	270.046	9136.79	6276.95	744.06	-6245.98	632774.36	503318.61	32°22'58.814"N	103°54'11.613"W	0.00	
15025.00†	91.169	270.046	9134.75	6376.79	744.14	-6345.96	632674.39	503318.69	32°22'58.819"N	103°54'12.779"W	0.00	
15125.00†	91.169	270.046	9132.71	6476.63	744.22	-6445.94	632574.42	503318.77	32°22'58.824"N	103°54'13.945"W	0.00	
15225.00†	91.169	270.046	9130.67	6576.47	744.30	-6545.91	632474.45	503318.85	32°22'58.828"N	103°54'15.111"W	0.00	
15325.00†	91.169	270.046	9128.63	6676.31	744.38	-6645.89	632374.48	503318.93	32°22'58.833"N	103°54'16.276"W	0.00	
15425.00†	91.169	270.046	9126.59	6776.14	744.46	-6745.87	632274.50	503319.01	32°22'58.838"N	103°54'17.442"W	0.00	
15525.00†	91.169	270.046	9124.56	6875.98	744.55	-6845.85	632174.53	503319.09	32°22'58.843"N	103°54'18.608"W	0.00	
15625.00†	91.169	270.046	9122.52	6975.82	744.63	-6945.83	632074.56	503319.17	32°22'58.847"N	103°54'19.774"W	0.00	
15650.29†	91.169	270.046	9122.00	7001.07	744.65	-6971.12	632049.27	503319.19	32°22'58.849"N	103°54'20.069"W	0.00	Bone Spring 2 A Sand
15725.00†	91.169	270.046	9120.48	7075.66	744.71	-7045.81	631974.59	503319.25	32°22'58.852"N	103°54'20.940"W	0.00	
15825.00†	91.169	270.046	9118.44	7175.50	744.79	-7145.79	631874.62	503319.33	32°22'58.857"N	103°54'22.106"W	0.00	
15925.00†	91.169	270.046	9116.40	7275.34	744.87	-7245.77	631774.64	503319.41	32°22'58.862"N	103°54'23.271"W	0.00	
16025.00†	91.169	270.046	9114.36	7375.18	744.95	-7345.75	631674.67	503319.50	32°22'58.866"N	103°54'24.437"W	0.00	
16125.00†	91.169	270.046	9112.32	7475.02	745.03	-7445.73	631574.70	503319.58	32°22'58.871"N	103°54'25.603"W	0.00	
16225.00†	91.169	270.046	9110.28	7574.86	745.11	-7545.71	631474.73	503319.66	32°22'58.876"N	103°54'26.769"W	0.00	
16325.00†	91.169	270.046	9108.24	7674.69	745.19	-7645.69	631374.76	503319.74	32°22'58.881"N	103°54'27.935"W	0.00	
16425.00†	91.169	270.046	9106.20	7774.53	745.27	-7745.66	631274.78	503319.82	32°22'58.885"N	103°54'29.101"W	0.00	



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REFERENCE WELL IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

WELLPATH DATA (242 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
16525.00†	91.169	270.046	9104.16	7874.37	745.35	-7845.64	631174.81	503319.90	32°22'58.890"N	103°54'30.266"W	0.00	
16625.00†	91.169	270.046	9102.12	7974.21	745.43	-7945.62	631074.84	503319.98	32°22'58.895"N	103°54'31.432"W	0.00	
16725.00†	91.169	270.046	9100.08	8074.05	745.51	-8045.60	630974.87	503320.06	32°22'58.900"N	103°54'32.598"W	0.00	
16825.00†	91.169	270.046	9098.04	8173.89	745.59	-8145.58	630874.90	503320.14	32°22'58.904"N	103°54'33.764"W	0.00	
16925.00†	91.169	270.046	9096.00	8273.73	745.67	-8245.56	630774.92	503320.22	32°22'58.909"N	103°54'34.930"W	0.00	
17025.00†	91.169	270.046	9093.96	8373.57	745.75	-8345.54	630674.95	503320.30	32°22'58.914"N	103°54'36.095"W	0.00	
17125.00†	91.169	270.046	9091.93	8473.40	745.83	-8445.52	630574.98	503320.38	32°22'58.918"N	103°54'37.261"W	0.00	
17225.00†	91.169	270.046	9089.89	8573.24	745.91	-8545.50	630475.01	503320.46	32°22'58.923"N	103°54'38.427"W	0.00	
17325.00†	91.169	270.046	9087.85	8673.08	745.99	-8645.48	630375.03	503320.54	32°22'58.928"N	103°54'39.593"W	0.00	
17425.00†	91.169	270.046	9085.81	8772.92	746.08	-8745.46	630275.06	503320.62	32°22'58.933"N	103°54'40.759"W	0.00	
17525.00†	91.169	270.046	9083.77	8872.76	746.16	-8845.44	630175.09	503320.70	32°22'58.937"N	103°54'41.925"W	0.00	
17625.00†	91.169	270.046	9081.73	8972.60	746.24	-8945.41	630075.12	503320.78	32°22'58.942"N	103°54'43.090"W	0.00	
17725.00†	91.169	270.046	9079.69	9072.44	746.32	-9045.39	629975.15	503320.86	32°22'58.947"N	103°54'44.256"W	0.00	
17825.00†	91.169	270.046	9077.65	9172.28	746.40	-9145.37	629875.17	503320.94	32°22'58.951"N	103°54'45.422"W	0.00	
17925.00†	91.169	270.046	9075.61	9272.12	746.48	-9245.35	629775.20	503321.02	32°22'58.956"N	103°54'46.588"W	0.00	
18025.00†	91.169	270.046	9073.57	9371.95	746.56	-9345.33	629675.23	503321.11	32°22'58.961"N	103°54'47.754"W	0.00	
18125.00†	91.169	270.046	9071.53	9471.79	746.64	-9445.31	629575.26	503321.19	32°22'58.965"N	103°54'48.920"W	0.00	
18225.00†	91.169	270.046	9069.49	9571.63	746.72	-9545.29	629475.29	503321.27	32°22'58.970"N	103°54'50.085"W	0.00	
18325.00†	91.169	270.046	9067.45	9671.47	746.80	-9645.27	629375.31	503321.35	32°22'58.975"N	103°54'51.251"W	0.00	
18425.00†	91.169	270.046	9065.41	9771.31	746.88	-9745.25	629275.34	503321.43	32°22'58.979"N	103°54'52.417"W	0.00	
18525.00†	91.169	270.046	9063.37	9871.15	746.96	-9845.23	629175.37	503321.51	32°22'58.984"N	103°54'53.583"W	0.00	
18625.00†	91.169	270.046	9061.34	9970.99	747.04	-9945.21	629075.40	503321.59	32°22'58.989"N	103°54'54.749"W	0.00	
18725.00†	91.169	270.046	9059.30	10070.83	747.12	-10045.19	628975.43	503321.67	32°22'58.993"N	103°54'55.914"W	0.00	
18825.00†	91.169	270.046	9057.26	10170.67	747.20	-10145.16	628875.45	503321.75	32°22'58.998"N	103°54'57.080"W	0.00	
18925.00†	91.169	270.046	9055.22	10270.50	747.28	-10245.14	628775.48	503321.83	32°22'59.003"N	103°54'58.246"W	0.00	
19025.00†	91.169	270.046	9053.18	10370.34	747.36	-10345.12	628675.51	503321.91	32°22'59.007"N	103°54'59.412"W	0.00	
19125.00†	91.169	270.046	9051.14	10470.18	747.44	-10445.10	628575.54	503321.99	32°22'59.012"N	103°55'00.578"W	0.00	
19225.00†	91.169	270.046	9049.10	10570.02	747.52	-10545.08	628475.56	503322.07	32°22'59.017"N	103°55'01.744"W	0.00	
19325.00†	91.169	270.046	9047.06	10669.86	747.61	-10645.06	628375.59	503322.15	32°22'59.021"N	103°55'02.909"W	0.00	
19425.00†	91.169	270.046	9045.02	10769.70	747.69	-10745.04	628275.62	503322.23	32°22'59.026"N	103°55'04.075"W	0.00	
19525.00†	91.169	270.046	9042.98	10869.54	747.77	-10845.02	628175.65	503322.31	32°22'59.031"N	103°55'05.241"W	0.00	
19625.00†	91.169	270.046	9040.94	10969.38	747.85	-10945.00	628075.68	503322.39	32°22'59.035"N	103°55'06.407"W	0.00	
19725.00†	91.169	270.046	9038.90	11069.22	747.93	-11044.98	627975.70	503322.47	32°22'59.040"N	103°55'07.573"W	0.00	
19825.00†	91.169	270.046	9036.86	11169.05	748.01	-11144.96	627875.73	503322.55	32°22'59.044"N	103°55'08.739"W	0.00	
19925.00†	91.169	270.046	9034.82	11268.89	748.09	-11244.94	627775.76	503322.64	32°22'59.049"N	103°55'09.904"W	0.00	
20025.00†	91.169	270.046	9032.78	11368.73	748.17	-11344.91	627675.79	503322.72	32°22'59.054"N	103°55'11.070"W	0.00	
20125.00†	91.169	270.046	9030.75	11468.57	748.25	-11444.89	627575.82	503322.80	32°22'59.058"N	103°55'12.236"W	0.00	
20225.00†	91.169	270.046	9028.71	11568.41	748.33	-11544.87	627475.84	503322.88	32°22'59.063"N	103°55'13.402"W	0.00	
20325.00†	91.169	270.046	9026.67	11668.25	748.41	-11644.85	627375.87	503322.96	32°22'59.068"N	103°55'14.568"W	0.00	
20425.00†	91.169	270.046	9024.63	11768.09	748.49	-11744.83	627275.90	503323.04	32°22'59.072"N	103°55'15.733"W	0.00	
20525.00†	91.169	270.046	9022.59	11867.93	748.57	-11844.81	627175.93	503323.12	32°22'59.077"N	103°55'16.899"W	0.00	
20625.00†	91.169	270.046	9020.55	11967.76	748.65	-11944.79	627075.96	503323.20	32°22'59.081"N	103°55'18.065"W	0.00	
20725.00†	91.169	270.046	9018.51	12067.60	748.73	-12044.77	626975.98	503323.28	32°22'59.086"N	103°55'19.231"W	0.00	
20825.00†	91.169	270.046	9016.47	12167.44	748.81	-12144.75	626876.01	503323.36	32°22'59.091"N	103°55'20.397"W	0.00	
20925.00†	91.169	270.046	9014.43	12267.28	748.89	-12244.73	626776.04	503323.44	32°22'59.095"N	103°55'21.563"W	0.00	



Planned Wellpath Report

Rev-F.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	JRU No.126H (Slot 4)
Area	Eddy County, NM	Well	No.126H (Slot 4)
Field	JRU NAD27	Wellbore	No.126H PWB (Slot 4)
Facility	JRU Pad		

WELLPATH DATA (242 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
21025.00†	91.169	270.046	9012.39	12367.12	748.97	-12344.71	626676.07	503323.52	32°22'59.100"N	103°55'22.728"W	0.00	
21125.00†	91.169	270.046	9010.35	12466.96	749.05	-12444.69	626576.09	503323.60	32°22'59.104"N	103°55'23.894"W	0.00	
21225.00†	91.169	270.046	9008.31	12566.80	749.14	-12544.66	626476.12	503323.68	32°22'59.109"N	103°55'25.060"W	0.00	
21325.00†	91.169	270.046	9006.27	12666.64	749.22	-12644.64	626376.15	503323.76	32°22'59.114"N	103°55'26.226"W	0.00	
21425.00†	91.169	270.046	9004.23	12766.48	749.30	-12744.62	626276.18	503323.84	32°22'59.118"N	103°55'27.392"W	0.00	
21525.00†	91.169	270.046	9002.19	12866.31	749.38	-12844.60	626176.21	503323.92	32°22'59.123"N	103°55'28.558"W	0.00	
21625.00†	91.169	270.046	9000.16	12966.15	749.46	-12944.58	626076.23	503324.00	32°22'59.127"N	103°55'29.723"W	0.00	
21725.00†	91.169	270.046	8998.12	13065.99	749.54	-13044.56	625976.26	503324.08	32°22'59.132"N	103°55'30.889"W	0.00	
21825.00†	91.169	270.046	8996.08	13165.83	749.62	-13144.54	625876.29	503324.17	32°22'59.136"N	103°55'32.055"W	0.00	
21925.00†	91.169	270.046	8994.04	13265.67	749.70	-13244.52	625776.32	503324.25	32°22'59.141"N	103°55'33.221"W	0.00	
22025.00†	91.169	270.046	8992.00	13365.51	749.78	-13344.50	625676.35	503324.33	32°22'59.146"N	103°55'34.387"W	0.00	
22125.00†	91.169	270.046	8989.96	13465.35	749.86	-13444.48	625576.37	503324.41	32°22'59.150"N	103°55'35.553"W	0.00	
22225.00†	91.169	270.046	8987.92	13565.19	749.94	-13544.46	625476.40	503324.49	32°22'59.155"N	103°55'36.718"W	0.00	
22325.00†	91.169	270.046	8985.88	13665.03	750.02	-13644.44	625376.43	503324.57	32°22'59.159"N	103°55'37.884"W	0.00	
22425.00†	91.169	270.046	8983.84	13764.86	750.10	-13744.41	625276.46	503324.65	32°22'59.164"N	103°55'39.050"W	0.00	
22525.00†	91.169	270.046	8981.80	13864.70	750.18	-13844.39	625176.49	503324.73	32°22'59.168"N	103°55'40.216"W	0.00	
22613.31	91.169	270.046	8980.00	13952.87	750.25	-13932.69	625088.20	503324.80	32°22'59.172"N	103°55'41.245"W	0.00	JRU No.126H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: No.126H PWB (Slot 4) Ref Wellpath: Rev-F.0

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]
7in Casing	25.00	12713.00	12688.00	25.00	9181.90	0.00	0.00	742.28	-4034.44

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) JRU No.126H PBHL	22613.31	8980.00	750.25	-13932.69	625088.20	503324.80	32°22'59.172"N	103°55'41.245"W	point

SURVEY PROGRAM - Ref Wellbore: No.126H PWB (Slot 4) Ref Wellpath: Rev-F.0

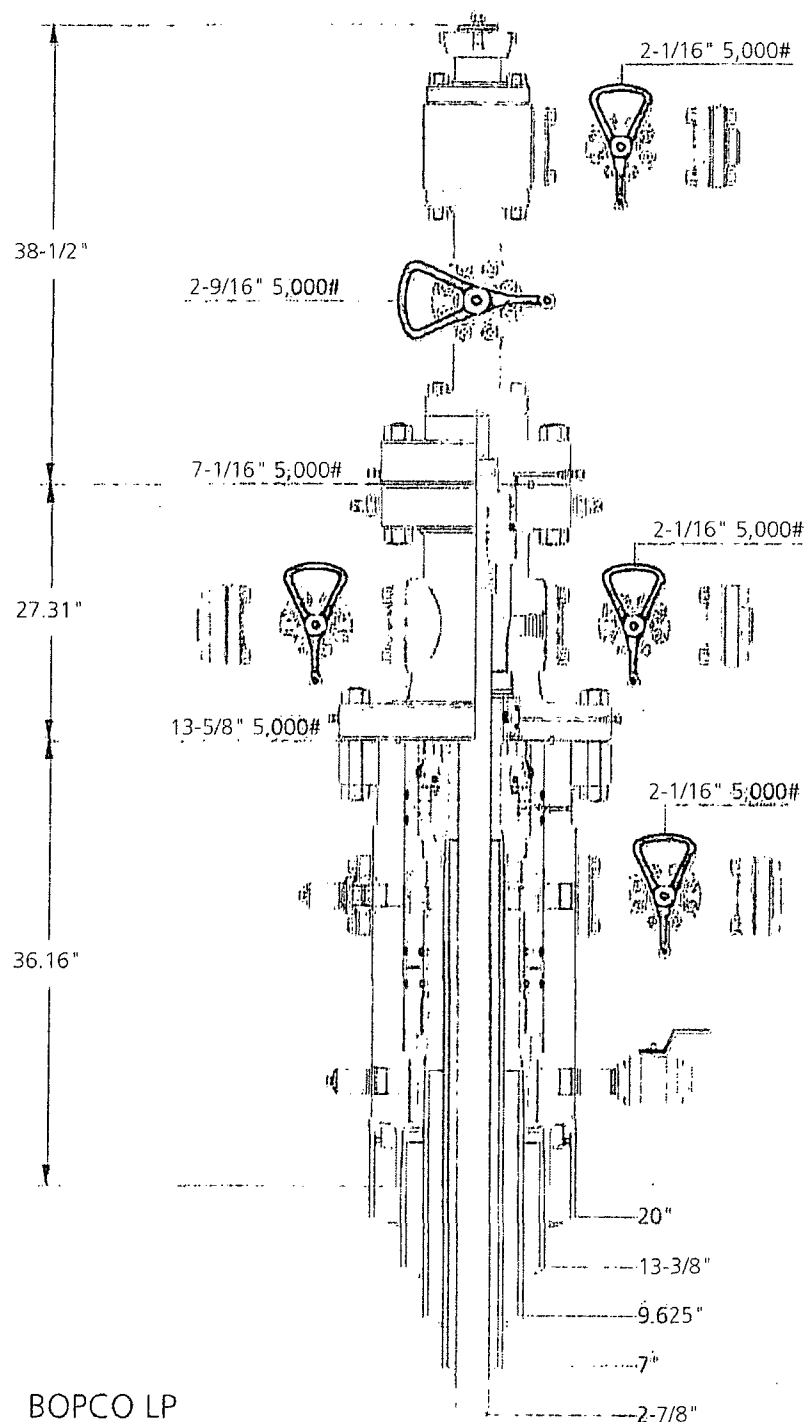
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	22613.31	NaviTrak (Standard)		No.126H PWB (Slot 4)



Well Name: James Ranch Unit 126H

Casing Program: 20" x 13-3/8" x 9-5/8" x 7" x 2-7/8"

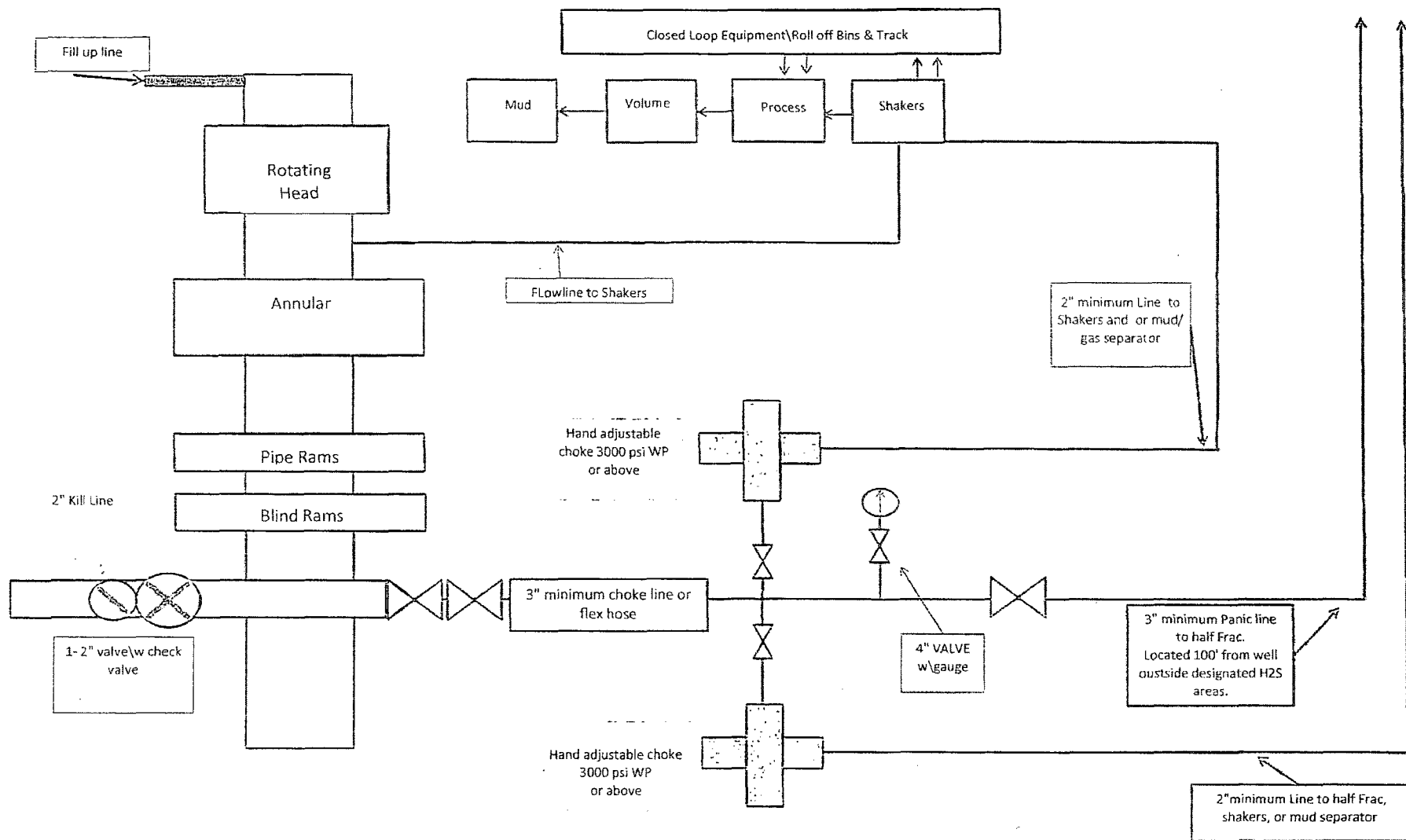
Note: Dimensional information reflected on this drawing are estimated measurements only.



BOPCO LP
MB-ND Wellhead
South East New Mexico

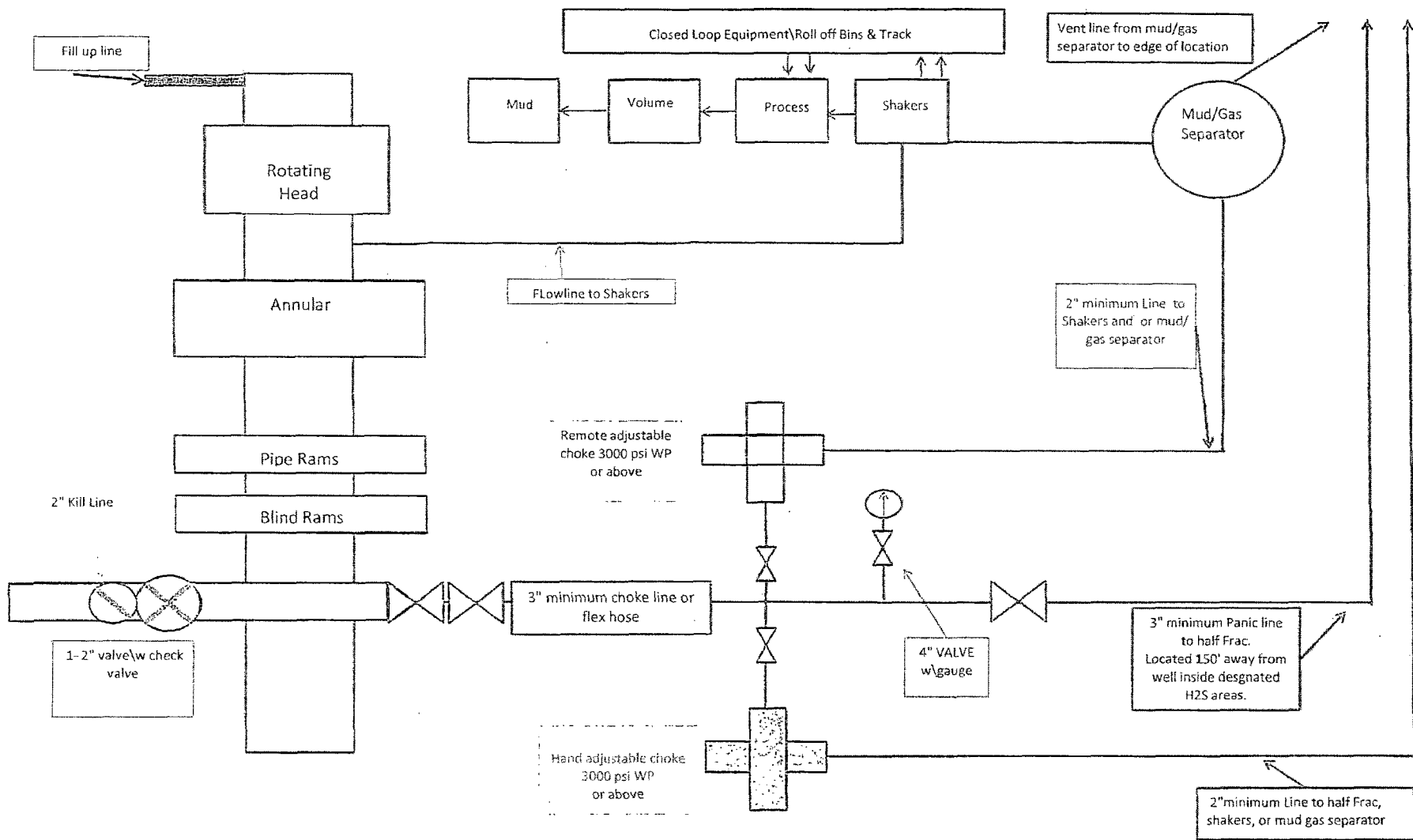


Name: Jeanette	Date: 3-15-13	Working Pressure: #	21077904
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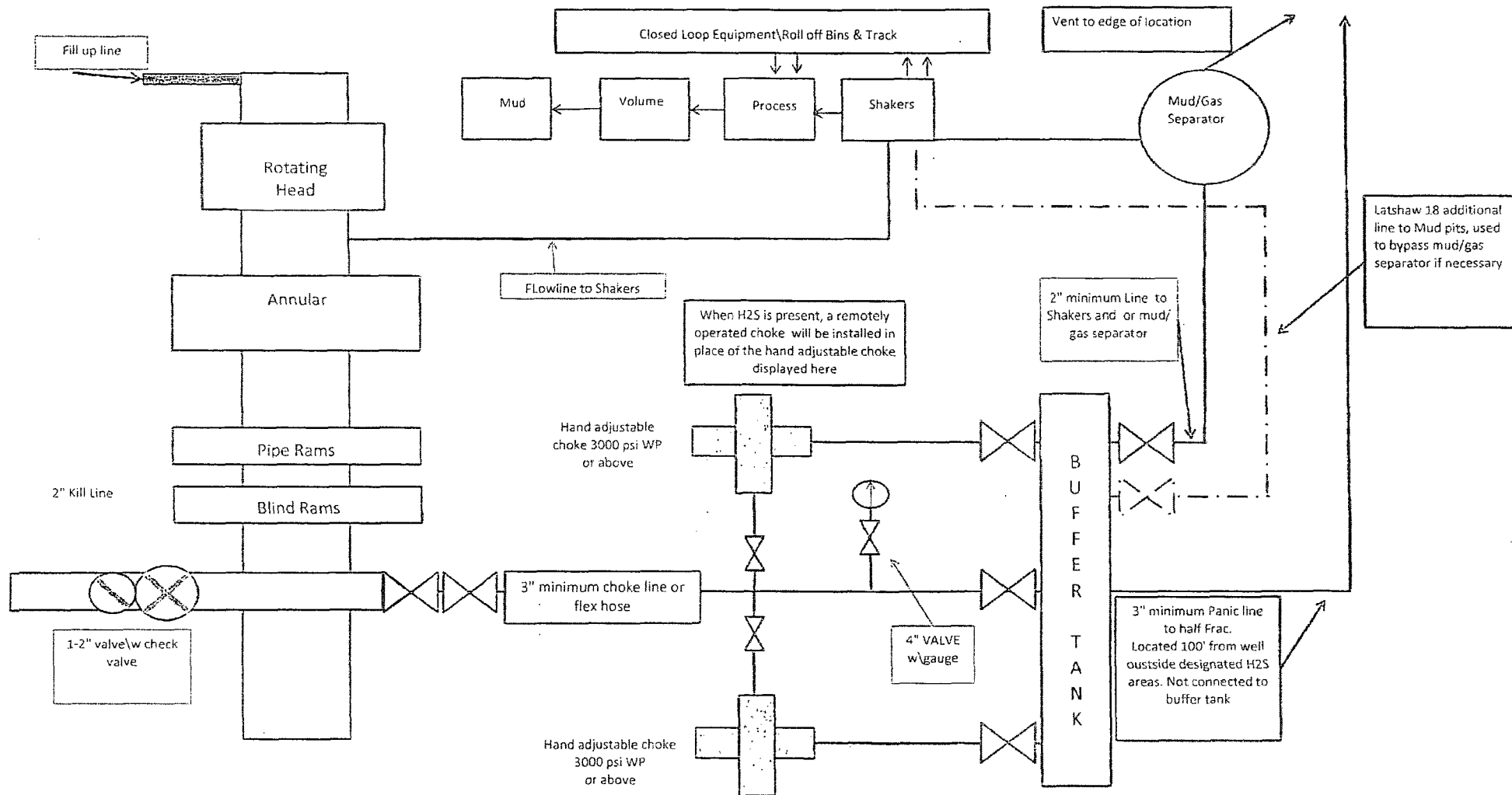
**13-5/8" X 3-M BOPE (2 Rams and Rotating Head) &
Closed Loop System Equipment Schematic
Diagram A**

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



**13-5/8" X 3-M BOPE (2 Rams and Rotating Head) &
Closed Loop System Equipment Schematic
H2S contingency
Diagram B**

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

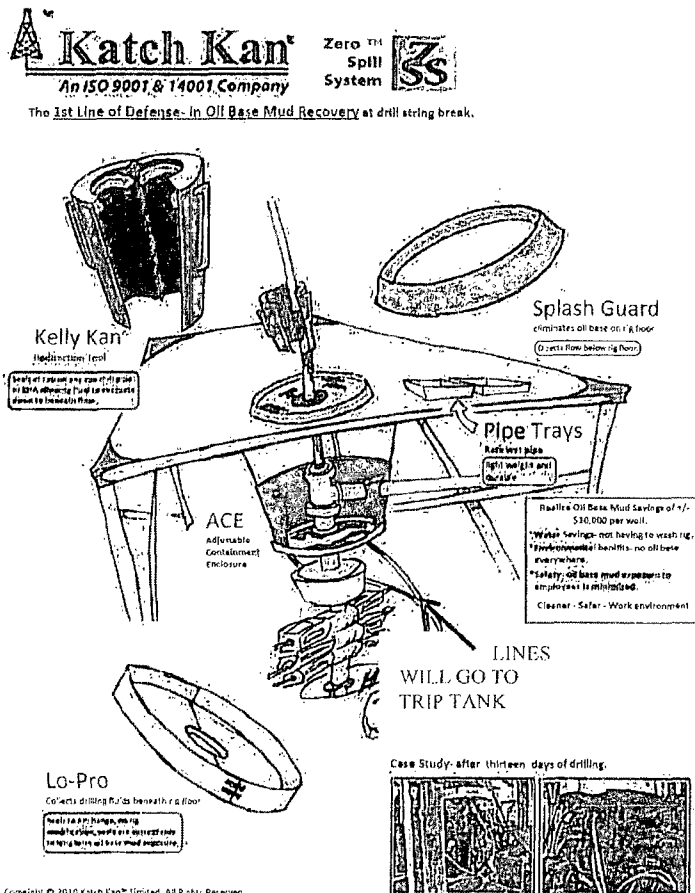


Latshaw 13-5/8" X 3-M BOPE (2 Rams and Rotating Head) & Closed Loop System Equipment Schematic Diagram C

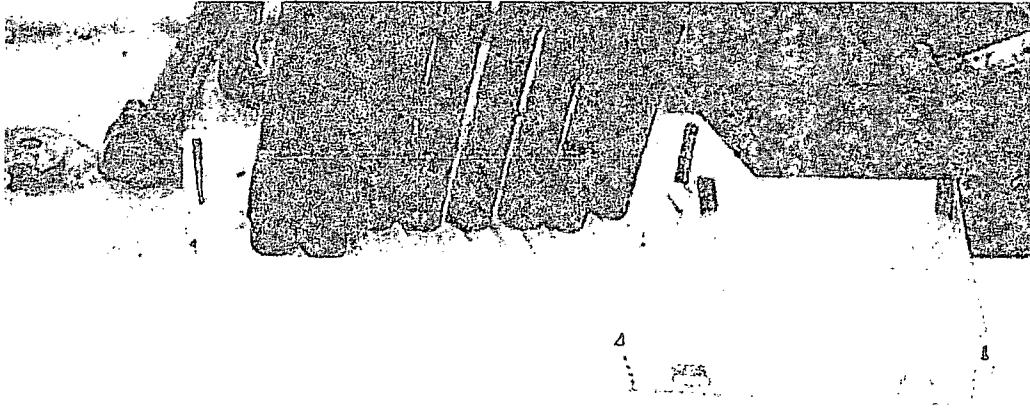
Oil-Based Drilling Mud Contingency Plan Latshaw Rig #18

This Site Specific Contingency Plan was developed to address the identified risks associated with BOPCO, LP's drilling and production operations. The plan discusses steps to be taken to minimize or prevent spills from occurring during drilling operations.

BOPCO is currently drilling with Latshaw Rig #18 and is requesting to use an oil-based mud to improve drilling efficiency in the curve and lateral. To ensure the oil based mud is completely contained while drilling these wells, BOPCO will employ a Zero Spill Technology which will ensure all oil based mud will be contained, captured, and introduced back into the circulating system. This technology will be provided by the company Katch Kan USA. The rig will employ the light weight Kelly Kan, which redirects all the drilling fluid down through a rotary table. This product comes equipped with seals to prevent the fluid from escaping from the top. The fluid is drained downward from the bottom of the Kelly Kan. A Katch Kan Splash Guard will also be used to prevent a fluid spill from the rotary table onto the rig floor. After draining through the rotary table, the fluid is directed to the rigs trip tank. Katch Kan USA will also provide pipe trays for setback areas to collect all fluid that drains out of the drill string and line pipe trays for rig personnel to use to capture all the stray fluid produced while breaking mud, cement, or hydraulic lines during rig operations. A mud vacuum system will be rigged up to remove the oil-based mud from pipe trays and any other area where the mud accumulates. All rig personnel will be properly trained on how to use the Zero Spill System and all the system components by Katch Kan USA before the use of the system.



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Drill pipe trays to capture fluid in drill string during trips.

In addition to the Katch Kan USA Zero Spill Technology system, BOPCO will employ other preventative measures to minimize hazards to the environment and human health. The drill rig is positioned on matting boards and will have a tinhorn cellar with concrete bottom. A 20 mil HDPE liner will be positioned on top of matting boards under the rig floor area to collect all spilled material and direct it to the cellar to be returned back to the circulating system. The liner will be placed in a way that minimizes tripping and slipping hazards and will be bermed to provide adequate containment capacity for these potential releases and maintenance fluids.

All oil-based mud will be trucked in from the mud plant to site. A maximum of 500 bbl of diesel will be stored in a tank on site for use in mud maintenance as well as three 500 bbl frac tanks for mud storage. The frac tank area will have a berm surrounding the tanks to contain any spilled fluid. Spill trays will be used in both of these areas to contain any spilled liquid caused from utilized connections.

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	BOPCO, LP
LEASE NO.:	NM06806
WELL NAME & NO.:	JAMES RANCH UNIT - 126H
SURFACE HOLE FOOTAGE:	1431' FNL & 1821' FEL
BOTTOM HOLE FOOTAGE	600' FNL & 330' FWL (Sec. 19)
LOCATION:	Section 21, T. 22 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

NOTE: Except for the following drilling Conditions of Approval, all other Conditions of Approval written for this well and approved on July 1, 2011 are still applicable.

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

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

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is encountered in quantities greater than 10 PPM the well shall be shut in and H₂S equipment shall be installed and flare line must be extended pursuant to Onshore Oil and Gas Order #6. After detection, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.**
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 are 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. **(When running the Gamma-Ray/Neutron log from the base of the Salado to the surface, the cable speed shall not exceed 20 ft./min.)**
5. **Due to the proximity of the proposed well to an existing wellbore, an anti-collision review of the James Ranch Unit 12 must be performed prior to drilling and an anti-collision report generated during drilling. Operator shall have a continuous gyro survey while drilling this well and not just for the horizontal. Mud logger shall be on location and shall be watching for cement or metal returns. Submit the results to the BLM Carlsbad Field Office.**

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. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. 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

HIGH CAVE/KARST

Possible water and brine flows in the Rustler, Salado and Castile formations.

Possible lost circulation within the Rustler, Delaware and Bone Spring.

1. The **13-3/8** inch surface casing shall be set at **approximately 525 feet (a minimum 10 feet above the salt)** and cemented to the surface. **Offset well was set in the salt at 543'.**
 - 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 **9-5/8** 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 cave/karst and potash.**
3. The minimum required fill of cement behind the **7** inch production casing is:

Operator has proposed DV tool at a depth of 5000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous casing shoe.

- 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 as excess calculates to 23%.**

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

☒ Cement not required; completion system will be installed.

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. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**
 - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
 - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
 - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
 - d. **Operator shall perform the 9-5/8" and 7" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
 - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

3. 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**.
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. 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.**
 - f. 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. DRILLING MUD

Operator shall report any oil based mud spill to the BLM within 12 hours of the spill.

E. DRILL STEM TEST

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

F. 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.

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