OCD-ARTESIA

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MAR 16 2010
NMOCD ARTESIA

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires. July 31, 2010

5. Lease Serial No. ~~4733-4807~~ NM 06808

6. If Indian, Allottee or Tribe Name

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 page 2.*

7. If Unit of CA/Agreement, Name and/or No.
NM 72615

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

8. Well Name and No.
James Ranch Unit #12

2. Name of Operator
BOPCO, L. P.

9 API Well No.
30-015-22162

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

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

10 Field and Pool or Exploratory Area
Undesignated (Delaware)

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
SWNE, 1451' FNL, 1821' FEL, Sec 21, T22S, R30E, Mer NMP, Lat N32.38096 , Lon W103.88350

11. Country or Parish, State
Eddy Co, NM

12. CHECK THE 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
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Re-enter and drill two opposing horizontal wellbores.
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete 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 must 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 must be filed once testing has been completed Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection)

With consideration given to the Application for Permit To Drill/Re-Enter for the above captioned well (APD originally submitted 1/08/2010, resubmitted 3/4/2010), BOPCO, L.P. respectfully wishes to supersede Form 3160-3 (APD) with Form 3160-5 (Sundry Notice of Intent to Deepen). As informed by BLM representative Myles Kristof on 3/4/2010, the current status of the James Ranch Unit #12 wellbore is Temporarily Abandoned pending perforation of the Delaware formation. As such, the Application for Permit to Drill/Re-Enter was not necessary in order to document plans to re-enter the original wellbore and drill two horizontal wellbores within the Delaware formation.

Please consider the original APD package documentation as exhibit of our intended plans of operation for the drilling of the horizontal wellbores and consider this Sundry Notice as notification of BOPCO, L.P.'s intent to re-enter and deepen the James Ranch Unit #12.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVED
MAR 15 2010
/s/ Myles Kristof
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Stephen M. Martinez

Title Drilling Engineer

Signature

Date 03/08/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

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)

604421

Address Stub - Discard Before Deposit

BUREAU OF LAND MANAGEMENT

BOPCO, L P.
(Formerly BEPCO Operating Co)
201 MAIN ST. SUITE 2700
FORT WORTH, TX 76102

JPMORGAN CHASE BANK

CHECK NO 801347
DATE 12/29/2009

APD-JRU 12H

VERIFY THE AUTHENTICITY OF THIS MULTI-TONE SECURITY DOCUMENT. CHECK BACKGROUND AREA CHANGES COLOR GRADUALLY FROM TOP TO BOTTOM.

BOPCO, L.P.
(Formerly BEPCO Operating Co.)
201 MAIN ST. SUITE 2700
FORT WORTH, TX 76102

JPMORGAN CHASE BANK
SAN ANGELO, TEXAS

88-88
1113

CHECK NO 801347
DATE 12/29/2009

PAY EXACTLY Six Thousand, Five Hundred and NO/100 Dollars

AMOUNT $******6,500.00

PAY TO... BUREAU OF LAND MANAGEMENT

⑈801347⑈ ⑆111300880⑆ 06300066878⑈

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 October 15, 2009

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-22162	90262	Undesignated (Delaware)

Property Code	Property Name	Well Number
306407	JAMES RANCH UNIT	12H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3169'

Surface Location

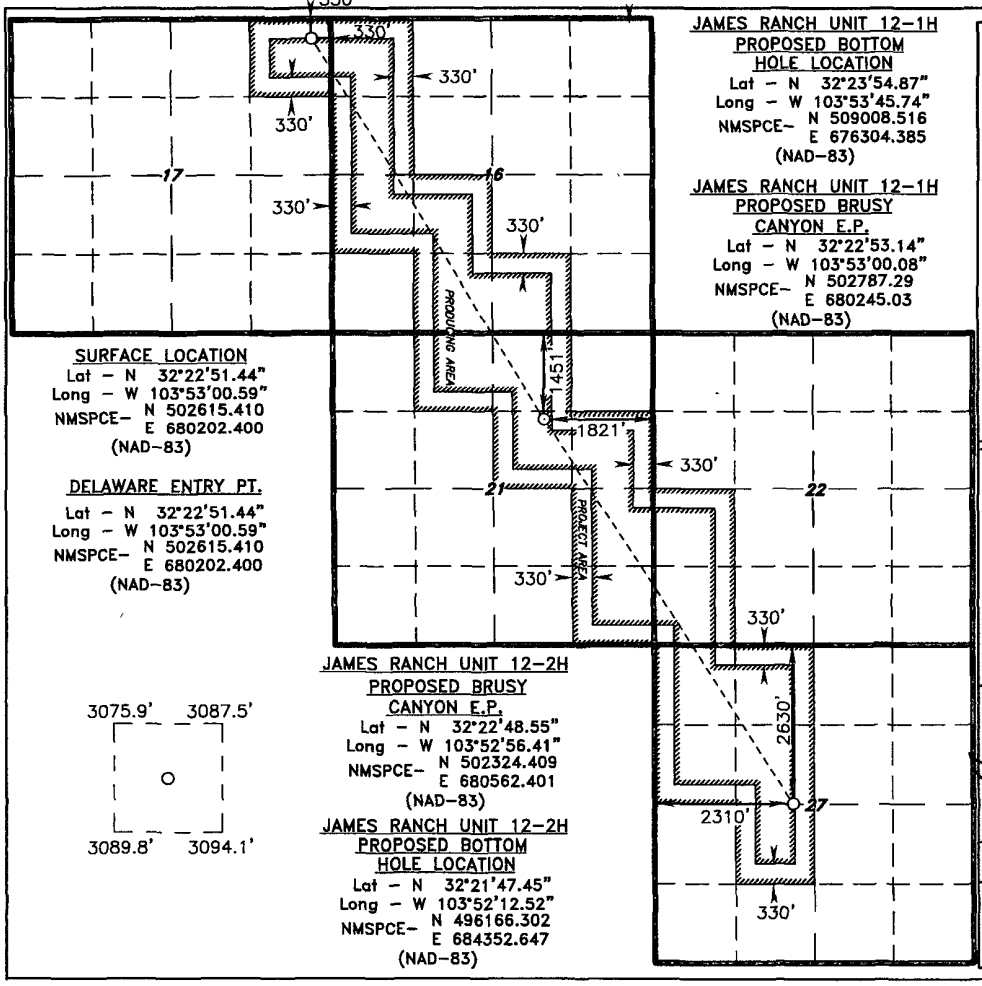
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	21	22 S	30 E		1451	NORTH	1821	EAST	EDDY

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
A	17	22 S	30 E		330	NORTH	330	EAST	EDDY
F	27	22 S	30 E		2630	NORTH	2310	WEST	EDDY

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

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location 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.

1/6/2010
Signature Date

Stephen M. Martinez
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

DECEMBER 4, 2009
Date Surveyed

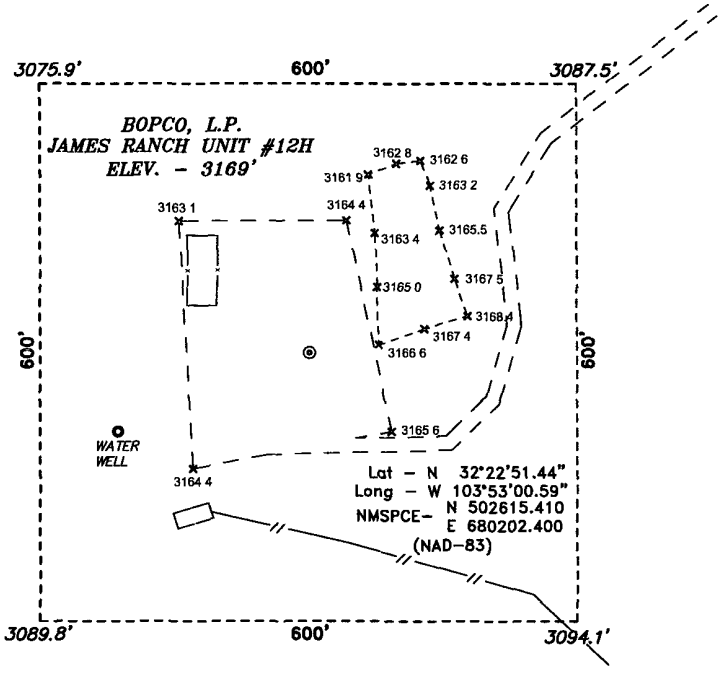
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

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



200 0 200 400 FEET

SCALE: 1" = 200'

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 TO WELL PAD AND PROPOSED WELL LOCATION.

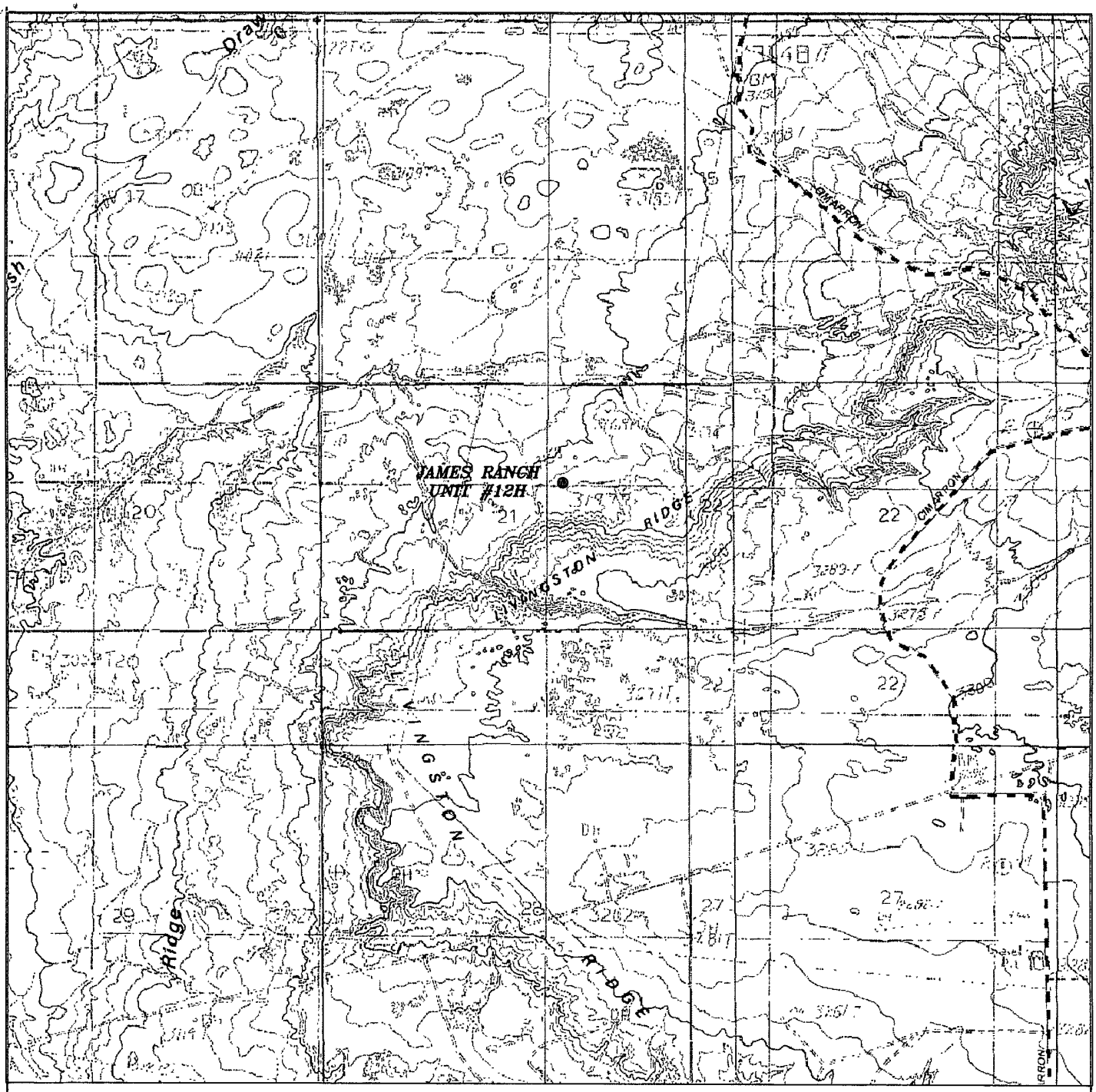
BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

BOPCO, L.P.

REF: JAMES RANCH UNIT #12H / WELL PAD TOPO

THE JAMES RANCH UNIT #12H LOCATED 1451' 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.

W.O. Number: 21971	Drawn By: J. SMALL		
Date: 12-16-2009	Disk: JMS 21971	Survey Date: 12-11-2009	Sheet 1 of 1 Sheets



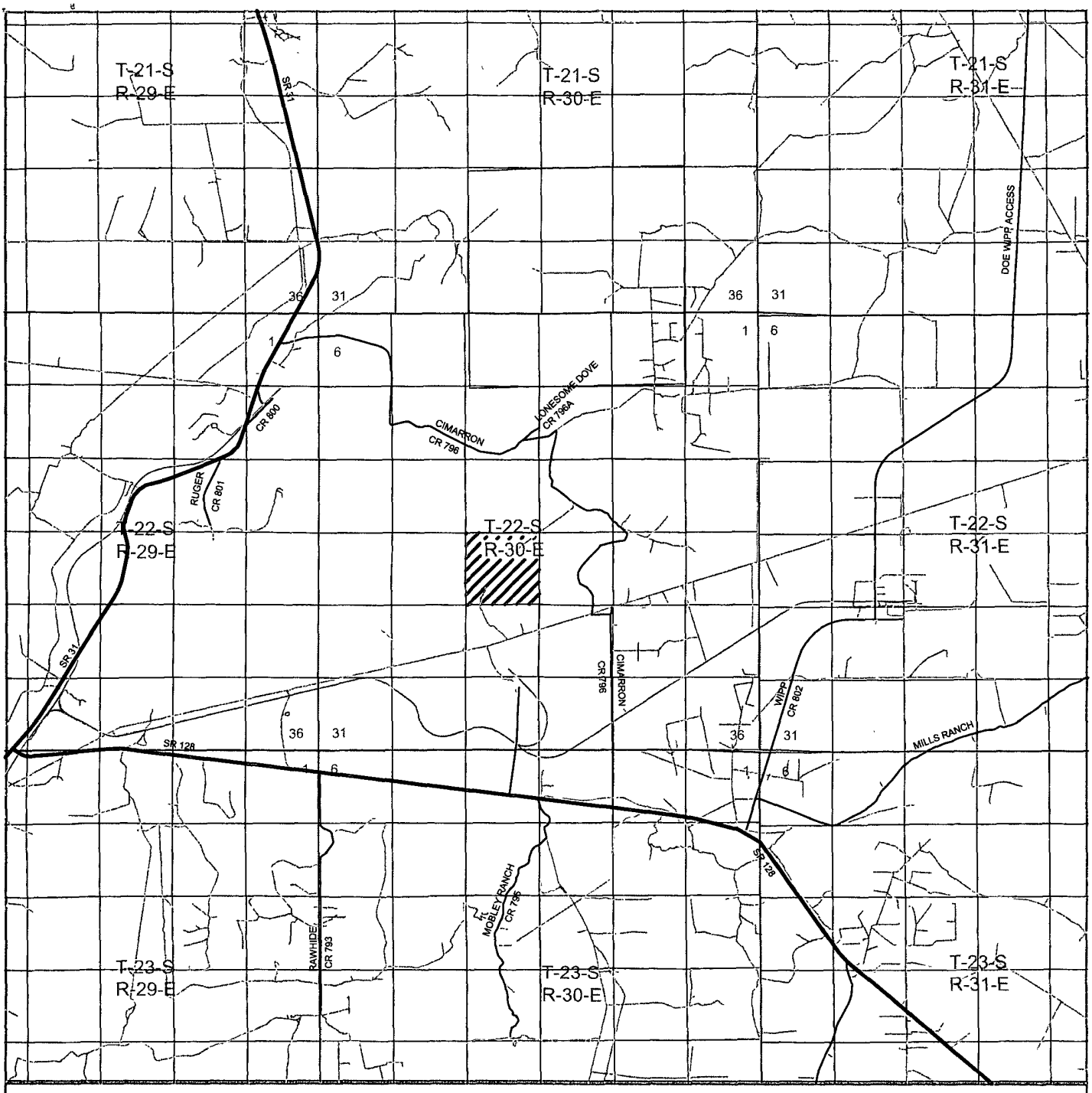
JAMES RANCH UNIT #12H
Located 1451' FNL and 1821' FEL
Section 21, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 21971
Survey Date:	12-11-2009
Scale:	1" = 2000'
Date:	12-16-2008

N

BOPCO, L.P.



JAMES RANCH UNIT #12H
Located 1451' FNL and 1821' FEL
Section 21, Township 22 South, Range 30 East,
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basin surveys
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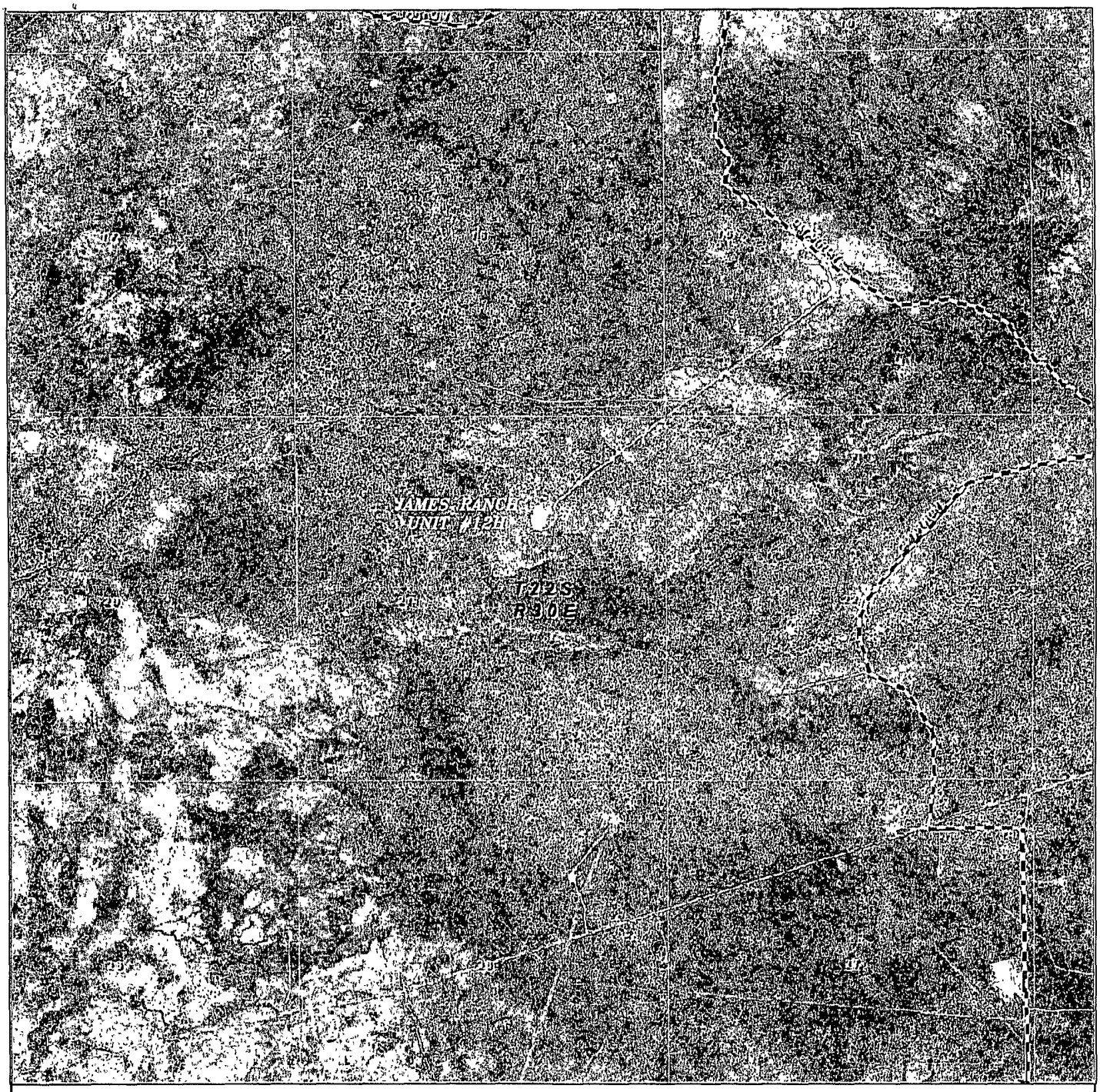
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 21971
Survey Date: 12-11-2009
Scale: 1" = 2 Miles
Date: 12-16-2008

N

BOPCO, L.P.



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W.O. Number: JMS 21971

Scale: 1" = 2000'

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

N

BOPCO, L.P.

Two laterals drilled out of the same wellbore. Pending successful completion and favorable production, the James Ranch Unit #12 location will be utilized as a "pad" drilling site for future development of BOPCO L.P.'s assets within adjacent sections.

Surface casing already set at 534' (1980).

7" casing already set at 7262' (2009).

Production casing for 12-1H will be 4-1/2" run with either hydraulic set or diesel reactive packers. Top of 4-1/2" liner will be approximately 200' above KOP (+/- 6400')

Production casing for 12-2H will be 4-1/2" run with either hydraulic set or diesel reactive packers. Top of 4-1/2" liner will be approximately 50' above KOP (+/- 6450')

Drilling procedure, BOP diagram, anticipated tops and surface plans attached.

This well is located within the R111 Potash area Potash waiver attached.

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a division office of BOPCO, L.P., 201 Main Street, Ft. Worth, TX 76102, Bond No. COB 000050 (Nationwide)

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: JAMES RANCH UNIT #12-1H & 2H

LEGAL DESCRIPTION - SURFACE: 1451' FNL, 1821' FEL, Section 21, T22S, R30E, Eddy County, NM. **(Footage calls updated from original survey performed in 1980 – See attached Exhibit "F" for original calls)**

#1H BHL: 330' FNL, 330' FEL, Section 17, T22S, R30E, Eddy County, New Mexico.
#2H BHL: 2630' FNL, 2310' FWL, Section 27, T22S, R30E, 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 3,188'
GL 3,169'

James Ranch Unit #12-1H

Formation	Estimated TVD	Estimated MD	Estimated Subsea Top	BEARING
T/Rustler	188'	188'	3,000'	Barren
B/Rustler	553'	553'	2,635'	Barren
T/Salt	553'	553'	2,635'	Barren
B/Salt	3,279'	3,279'	-91'	Barren
T/Lamar Lime	3,533'	3,533'	-345'	Barren
T/Delaware Sands	3,556'	3,556'	-368'	Oil/Gas
KOP (Kick Off Point)	6,420'	6,420'	-3,232'	N/A
T/Brush Canyon "U" Sand	6,978'	7,193'	-3,790'	Oil/Gas
EOC Target	6,990'	7,270'	-3,810'	Oil/Gas
TD (end of lateral)	6,990'	14,496'	-3,810'	Oil/Gas

James Ranch Unit #12-2H

Formation	Estimated TVD	Estimated MD	Estimated Subsea Top	BEARING
T/Rustler	180'	180'	3,000'	Barren
B/Rustler	545'	545'	2,635'	Barren
T/Salt	545'	545'	2,635'	Barren
B/Salt	3,271'	3,271'	-91'	Barren
T/Lamar Lime	3,525'	3,525'	-345'	Barren
T/Delaware Sands	3,548'	3,548'	-368'	Oil/Gas
KOP (Kick Off Point)	6,587'	6,580'	-3,392'	N/A
T/Brush Canyon "U" Sand	6,978'	7,083'	-3,790'	Oil/Gas
EOC Target	7,050'	7,330'	-3,870'	Oil/Gas
TD (end of lateral)	7,050'	14,295'	-3,870'	Oil/Gas

POINT 3: CASING PROGRAM

James Ranch Unit #12 (Existing Wellbore)

TYPE	HOLE SIZE	INTERVALS	PURPOSE	CONDITION
13-3/8", 48#, H-40, STC	17-1/2"	0' - 534'	Surface Casing	Existing (1980)
9-5/8", 36#, K-55, LTC	12-1/4"	0' – 3,726'	Intermediate Casing	Existing (1980)
7", 26#, P-110, LTC	8-3/4"	0' – 7,262'	Intermediate Casing	Existing (2009)

#12-1H

TYPE	HOLE SIZE	INTERVALS	PURPOSE	CONDITION
4-1/2", 11.6#, P-110, Ultra FJ	6-1/8"	6,400' – 10,500'	Production Casing	New
4-1/2", 11 6#, P-110, LTC	6-1/8"	10,500' - 14,496	Production Casing	New

#12-2H

TYPE	HOLE SIZE	INTERVALS	PURPOSE	CONDITION
4-1/2", 11.6#, P-110, Ultra FJ	6-1/8"	6,450' – 10,500'	Production Casing	New
4-1/2", 11 6#, P-110, LTC	6-1/8"	10,500' - 14,295'	Production Casing	New

CASING DESIGN SAFETY FACTORS:

#12-1H

TYPE	TENSION	COLLAPSE	BURST
4-1/2", 11.6#, P-110, LTC/UFJ	55 8	2 25	2.63

#12-2H

TYPE	TENSION	COLLAPSE	BURST
4-1/2", 11.6#, P-110, LTC/UFJ	55.8	2 23	2 63

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

PRODUCTION CASING

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 (2500 psig) on top of the maximum treating fluid gradient (0 65 psi/ft) Backup on production strings will be formation pore pressure. The effects of tension on burst will not be utilized

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOP equivalent to Diagram 1 will be nippled up on the existing intermediate casing head. After rigging up, the BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. will be hydro-tested to 3,000 psi on the intermediate casing. The annular will be tested to 2500 psi. In addition to the rated working pressure test, a low pressure (250 psi) test will be required. These tests will be performed as per Onshore Oil and Gas Order No. 2, Drilling Operations, paragraph III.A.2.h.iv:

a) When initially installed
b) Whenever any seal subject to test pressure is broken
c) Following related repairs
d) At 30 day intervals

A function test to insure that the preventers are operating correctly will be performed on each trip. See the attached Diagram 1 for the minimum criteria for the choke manifold.

POINT 5: MUD PROGRAM

#12-1H

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
6,420' – 14,496'	FW/Gel/Starch	8 5 – 9.0	28-36	NC	NC	<20	9.5-10.0

#12-2H

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
6,587' – 14,295'	FW/Gel/Starch	8.5 – 9 0	28-36	NC	NC	<20	9 5-10 0

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING

For each lateral.
Run #1: GR with MWD during drilling of lateral leg with drill pipe conveyed GR-PEX-Density in lateral leg open hole at total depth.

C) CORING

No cores are anticipated.

D) CEMENT

James Ranch Unit #12 (Existing Wellbore

CASING	HOLE SIZE	INTERVALS	DESCRIPTION
13-3/8", 48#, H-40, STC	17-1/2"	0' - 534'	1000 sx, Class 'C' + 2% CaCl (1980)
9-5/8", 36#, K-55, LTC	12-1/4"	0' – 3,726'	1725 sx BJ "lite" + ¼ pps Floseal + 8 pps salt; 250 sx Class 'C' + 2% CaCl (1980)
7", 26#, P-110, LTC	8-3/4"	0' – 7,262'	Two stage: 175 sx "Tuned Light" + 165 sx HalCem; 675 sx EconoCem + 100 sx HalCem (2009)

No cement will be used on the 4-1/2" casing run in the laterals.

E) DIRECTIONAL DRILLING

#12-1H
A 6-1/8" window will be cut within the existing 7" casing and a 6-1/8" lateral will be drilled to a measured depth of 14,496' at a TVD of 6,990'. The kickoff point will be at a measured depth of approximately 6,420' (6,413' TVD) building at 12 deg/100' to a maximum of 90 degrees along an azimuth of 328 degrees. The 90 degree inclination will be held along the entire lateral length from 7,270' – 14,496' (6,990' TVD). A liner consisting of 4-1/2", 11.6#, P-110, LTC and Ultra FJ casing will be installed with either hydraulic or diesel reactive packers installed for zone isolation. See attached proposed directional survey report.

#12-2H
A 6-1/8" window will be cut within the existing 7" casing and a 6-1/8" lateral will be drilled to a measured depth of 14,295' at a TVD of 7,050'. The kickoff point will be at a measured depth of approximately 6,587' (6,580' TVD) building at 12 deg/100' to a maximum of 90 degrees along an azimuth of 148 degrees. The 90 degree inclination will be held along the entire lateral length from 7,329' – 14,295' (7,050' TVD). A liner consisting of 4-1/2", 11.6#, P-110, LTC and Ultra FJ casing will be installed with either hydraulic or diesel reactive packers installed for zone isolation. See attached proposed directional survey report

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3080 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 3548'-7291' TVD. No H_2S is expected.

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

40 days drilling operations

40 days completion operations

BDH/smm

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: JAMES RANCH UNIT #12-1H & 2H

LEGAL DESCRIPTION - SURFACE. 1451' FNL, 1821' FEL, Section 21, T22S, R30E, Eddy County, NM. **(Footage calls updated from original survey performed in 1980 – See attached Exhibit "F" for original calls)**

#1H BHL: 330' FNL, 330' FEL, Section 17, T22S, R30E, Eddy County, New Mexico.
#2H BHL: 2630' FNL, 2310' FWL, Section 27, T22S, R30E, Eddy County, New Mexico.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location

See Exhibit "A" & "C".

B) Existing Roads

Take Hwy 128 West from Jal, New Mexico toward Carlsbad to Hwy 31. Turn north @ Hwy 31, go approximately 7 miles to Cimmaron road (Cimmaron road is clearly marked). Turn east and travel 5 1/10 miles on Cimarron road, after cattle guard turn right down sandy road Travel approx 2 1/2 miles to location (road will curve right to location)

C) Existing Road Maintenance or Improvement Plan

See Exhibit "B". The existing road will be improved to 12' wide and improved with 6" of watered and compacted caliche in areas where erosion and/or weathering have degraded its condition.

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location

Existing lease roads will be used.

B) Width

12' Wide.

C) Maximum Grade

Not Applicable.

D) Turnouts

As required by BLM stipulations.

E) Culverts, Cattle Guards, and Surfacing Equipment

If required, culverts and cattle guards will be set per BLM specifications.

POINT 3: LOCATION OF EXISTING WELLS

Exhibit "C" indicates existing wells within the surrounding area.

POINT 4: LOCATION OF EXSITING OR PROPOSED FACILITIES

A) Existing facilities within one mile owned or controlled by lessee/operator.

The existing facilities currently on the James Ranch Unit #12 location will be permanently removed. See Point 4.B.

B) New Facilities in the Event of Production (See Exhibit "E"):

New production facilities will be installed at the Legg Federal #1 (Sec. 27, T22S, R30E) A 2-7/8" steel flowline will and supplemental power lines (260 KVa, 3 Phase) will be routed above ground from the Legg Federal #1, along the existing pipeline right-of-way, to the James Ranch Unit #12 location as required The steel flowline will be suspended across low water crossings and/or areas of significant erosion as required by the BLM.

C) Rehabilitation of Disturbed Areas Unnecessary for Production:

Following the construction of the location, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas necessary for use will be graded to blend in the surrounding topography – See Point 10

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

A) Location and Type of Water Supply

Fresh water will be hauled from Johnson Station 50 miles east of Carlsbad, New Mexico or other commercial facilities. Brine water will be hauled from commercial facilities.

B) Water Transportation System

Water hauled to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

A) Materials

On-site caliche will be used. If this is not sufficient, caliche will be hauled from a BLM approved pit.

B) Land Ownership

Federally owned.

C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site.

D) Access Roads

See Exhibit "A".

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the steel pits and will be hauled to an approved disposal facility

B) Drilling Fluids

Drilling fluids will be contained in the steel pits, frac tanks, and will be disposed of at licensed disposal facilities

C) Produced Fluids

Water production will be contained in the steel pits as part of the closed loop system.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in the test tanks. Prior to cleanup operations, any hydrocarbon material remaining in the steel pits will be removed by skimming and hauling as the situation would dictate.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if testing indicates potential productive zones In any case, the "mouse" hole and the "rat" hole will be covered. Reasonable cleanup will be performed prior to the final restoration of the site.

POINT 8: ANCILLARY FACILITIES

None Required.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

Exhibit "D" shows the dimensions and the location of major rig components. Exhibit "G" shows the dimensions of the existing well pad and details the proposed expansion of the location in order to accommodate major rig components. Location expansion will also allow for future development of the James Ranch Unit #12 location as a "pad" drilling site pending successful completion and favorable production. The previously reclaimed reserve pit east of the existing location will require minor excavation and construction as follows:

1) Area #1 denoted on Exhibit "G" will require only minor excavation (4-6") and will be capped and leveled with 4" of compacted caliche to prevent leaching of previously reclaimed material. Capping with caliche will be performed per BLM and NMOCD requirements. All excavated materials will be hauled to disposal at Controlled Recovery Inc. located approximately 25 miles Northeast of Carlsbad, N.M.
2) Area #2 denoted on Exhibit "G" will require as much as one to two feet (1-2') of excavation in order to level the location expansion area with the existing pad. The final grade of Area #2 will contain 4" of compacted caliche as a cap to prevent leaching of previously reclaimed material. Capping with caliche will be performed per BLM and NMOCD requirements. All excavated materials will be hauled to disposal at Controlled Recovery Inc. located approximately 25 miles Northeast of Carlsbad, N M.
3) Area #3 denoted on Exhibit "G" will be leveled to match the grade of the existing pad. Materials moved from Area #3 will be used to build, fill, level, and cap areas of the proposed pad extension per BLM and NMOCD requirements.

Only minor leveling of the existing well pad will be required. No significant cuts or fills will be necessary other than previously stated. A twelve inch (12") earthen berm preventing fluids from entering the location or leaving the location will encompass the entire location. A secondary containment berm will encompass the steel "frac" tanks used for temporary fluids storage. Erosion control materials will be utilized where applicable as required by the BLM on the northern and western edges of the location

B) Locations of Access Road

See Exhibits "B" & "G"

C) Lining of the Pits

No reserve pit. Closed loop system.

POINT 10: PLANS FOR RESTORATION OF THE SERVICE

A) Closed loop system.

The closed loop system will be utilized to drill the subject well. No earthen pits will be used that require remediation. All solids and drill fluids will be hauled off location to Controlled Recovery Inc. located approximately 25 miles Northeast of Carlsbad, N.M.

B) Restoration Plans – Production Developed

Those areas not required for production will be graded to blend with the surrounding topography. Topsoil, as available, will be placed upon those areas and seeded. The portion of the site required for production will be graded to minimize erosion and provide access during inclement conditions. Following depletion and abandonment of the site, restoration procedures will be those that follow under Item C.

C) Restoration Plans – No Production Developed

With no production developed, the entire surface disturbed by construction of the well site will be restored. The site will be contoured to blend with the surrounding topography and provide drainage of surface water The topsoil, as available, shall be replaced in a uniform layer and seeded according to the BLM stipulations.

D) Rehabilitation Timetable

Upon completion of drilling operations, the initial cleanup of the site will be performed as soon as weather and site conditions allow economic execution of the work.

POINT 11: OTHER INFORMATION

A) Terrain

Relatively Flat.

B) Soil

Caliche and sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There are no ponds, lakes, streams, or rivers within several miles of the wellsite.

F) Water Wells

There is one (1) water well within one mile of the existing location (See Exhibit "C").

Perry R. Bass
1275' FNL, 1830' FEL
Sec 21, T-22-S, R-30-E

G) Residences and Buildings

None in the immediate vicinity.

H) Historical Sites

None observed.

I) Archeological Resources

An archeological survey will be obtained for this area. The survey area will be a 600' x 600' square with its center on the wellhead stake. Before any construction begins, a full and complete archeological survey will be submitted to the BLM. Any location or construction conflicts will be resolved before construction begins.

J) Surface Ownership

The well site and access road are both on federally owned land.

K) Well signs will be posted at the drilling site.

L) Open Pits

No earthen pits will be used. A closed loop system will be used and employ steel pits only

POINT 12: OPERATOR'S FIELD REPRESENTATIVE

(Field personnel responsible for compliance with development plan for surface use).

DRILLING
William R. Dannels
Box 2760
Midland, Texas 79702
(432) 683-2277

PRODUCTION
Dean Clemmer
3104 East Green Street
Carlsbad, New Mexico 88220
(505) 887-7329

Carlos Cruz
Box 2760
Midland, Texas 79702
(432) 683-2277

BOPCO, L.P.

P. O. Box 2760
Midland, Texas 79702

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

January 6, 2010

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 – 3162.4
JAMES RANCH UNIT # 12-1H, 12-2H
1,451' FNL, 1,821' FEL, SEC. 21, T22S, R30E, EDDY COUNTY, NM

Dear Mr Peterson,

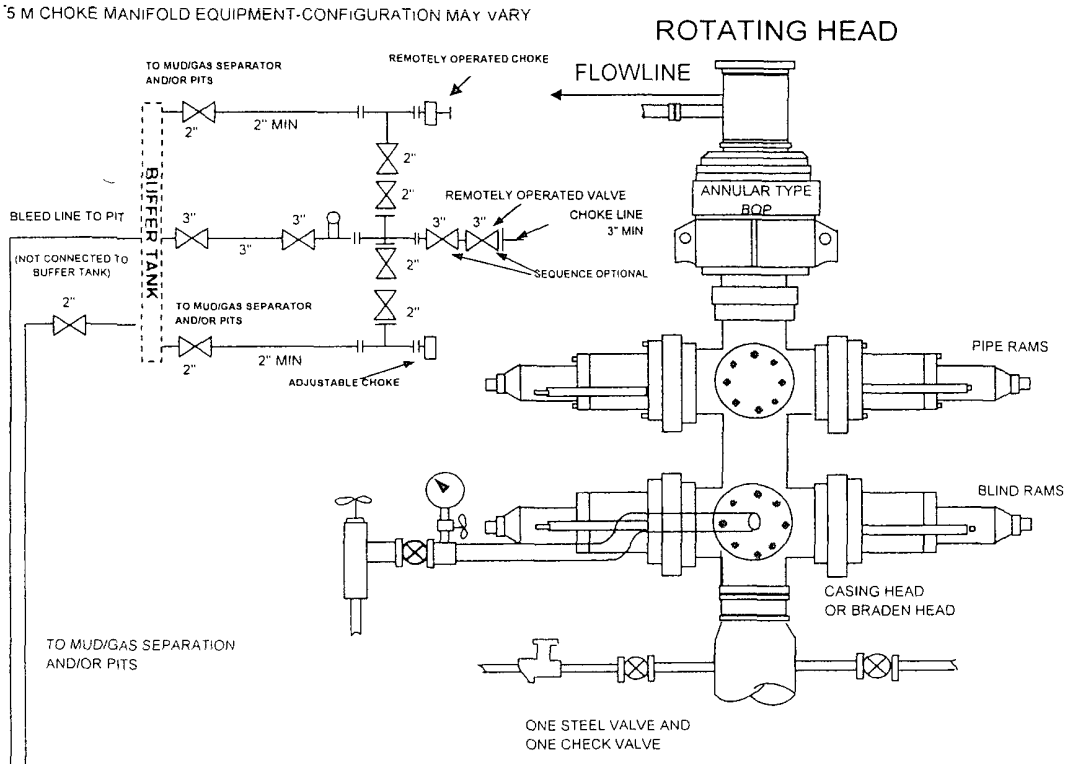
In reference to the above captioned well, I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route, that I am familiar with the conditions which currently exist, that the statements made in the attached eight point drilling plan and multi-use 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
Drilling Engineer

BOPCO, L. P.
5-M WP BOPE WITH 5-M WP ANNULAR



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. One double gate Blowout preventer with lower pipe rams and upper blind rams, all hydraulically controlled
B Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
C All connections from operating manifold to preventers to be all steel hose or tube a mininum of one inch in diameter
D. The available closing pressure shall be at least 15% in excess of that required with suffficient volume to operate (close, open, and re-close) the preventers.
E All connections to and from preventers to have a pressure rating equivalent to that of the BOPs
F Manual controls to be installed before drilling cement plug.
G Valve to control flow through drill pipe to be located on rig floor.
H Chokes must be adjustable. Choke spool may be used between rams

DIAGRAM 1

TO STEEL MUD TANKS

BLEED LINE TO STEEL PIT (NOT CONNECTED TO BUFFER TANK)

BOPCO, L.P.
201 MAIN ST.
FORT WORTH, TEXAS 76102-3131
817/390-8400

December 1, 2009

FEDERAL EXPRESS

Mosaic Potash Carlsbad Inc.
P. O. Box 71
1361 Potash Mines Road
Carlsbad, New Mexico 88220

Attention: Mr. Dan Morehouse

Re: Waiver of Objection
Proposed James Ranch Unit 12-1H
Proposed James Ranch Unit 12-2H
1450' FNL & 1830' FEL
Section 21, T22S-R30E
Eddy County, New Mexico

Dear Mr. Morehouse:

Bass hereby requests a waiver of any objection Mosaic Potash Carlsbad, Inc. might have for the drilling of the above wells. Bass plans to drill two horizontals from the existing JRU #12 surface location. In the event Mosaic is agreeable to providing its waiver, please sign this letter in the space provided below and return one (1) executed original to the undersigned at your earliest convenience.

Thank you very much, and should you have any questions or comments in the above regard, please do not hesitate to contact the undersigned at (817) 339-7185.

Very truly yours,
BASS ENTERPRISES PRODUCTION CO.

Brad Glasscock

AGREED AND ACCEPTED this 2nd day of December, 2009.

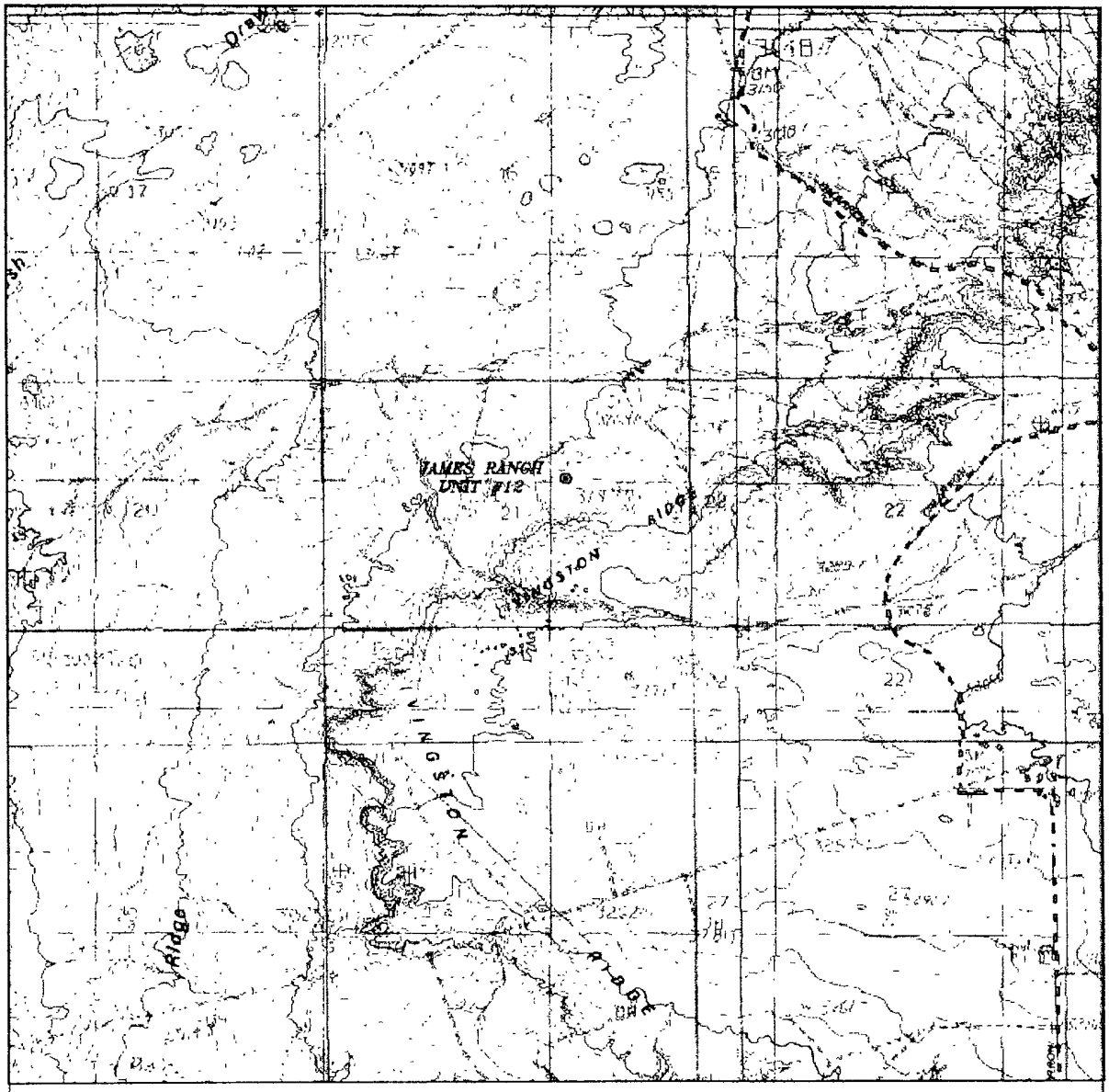
MOSAIC POTASH CARLSBAD, INC.

By: (Dan J Parris)

Its: _____

F:\landsecs\Merryn Documents\Docs\BG\Letters\Mosaic Potash Inc.-JRU #12 1H & 2H Waiver.doc

James Ranch Unit #12-1H & 2H
Exhibit "A"



JAMES RANCH UNIT #12
Located 1451' FNL and 1821' FEL
Section 21, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

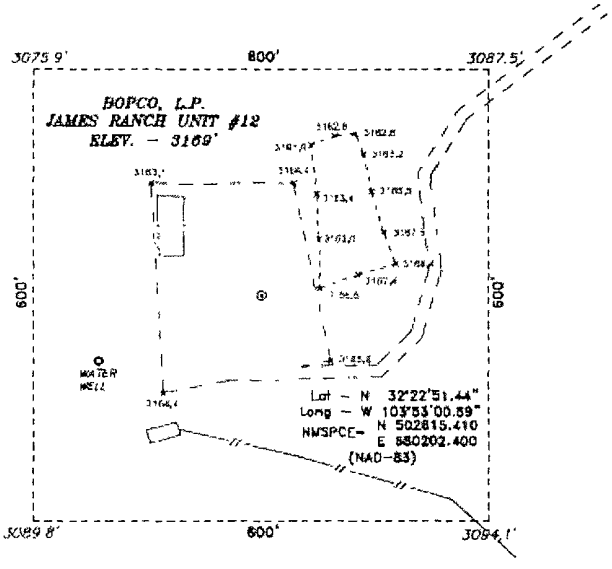
basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 21971
Survey Date: 12-11-2009
Scale: 1" = 2000'
Date: 12-16-2008

BOPCO, L.P.

James Ranch Unit #12-1H & 2H
Exhibit "B"

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



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

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 TO WELL PAD AND PROPOSED WELL LOCATION

BOPCO, L.P.

REF JAMES RANCH UNIT #12 / WELL PAD TOPO

THE JAMES RANCH UNIT #12 LOCATED 1451' 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.

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

W.O. Number: 21971	Drawn By: J. SMALL		
Date: 12-16-2009	Disk: JMS 21971	Survey Date: 12-11-2009	Sheet 1 of 1 Sheets

James Ranch Unit #12-1H & 2H

Exhibit "C"

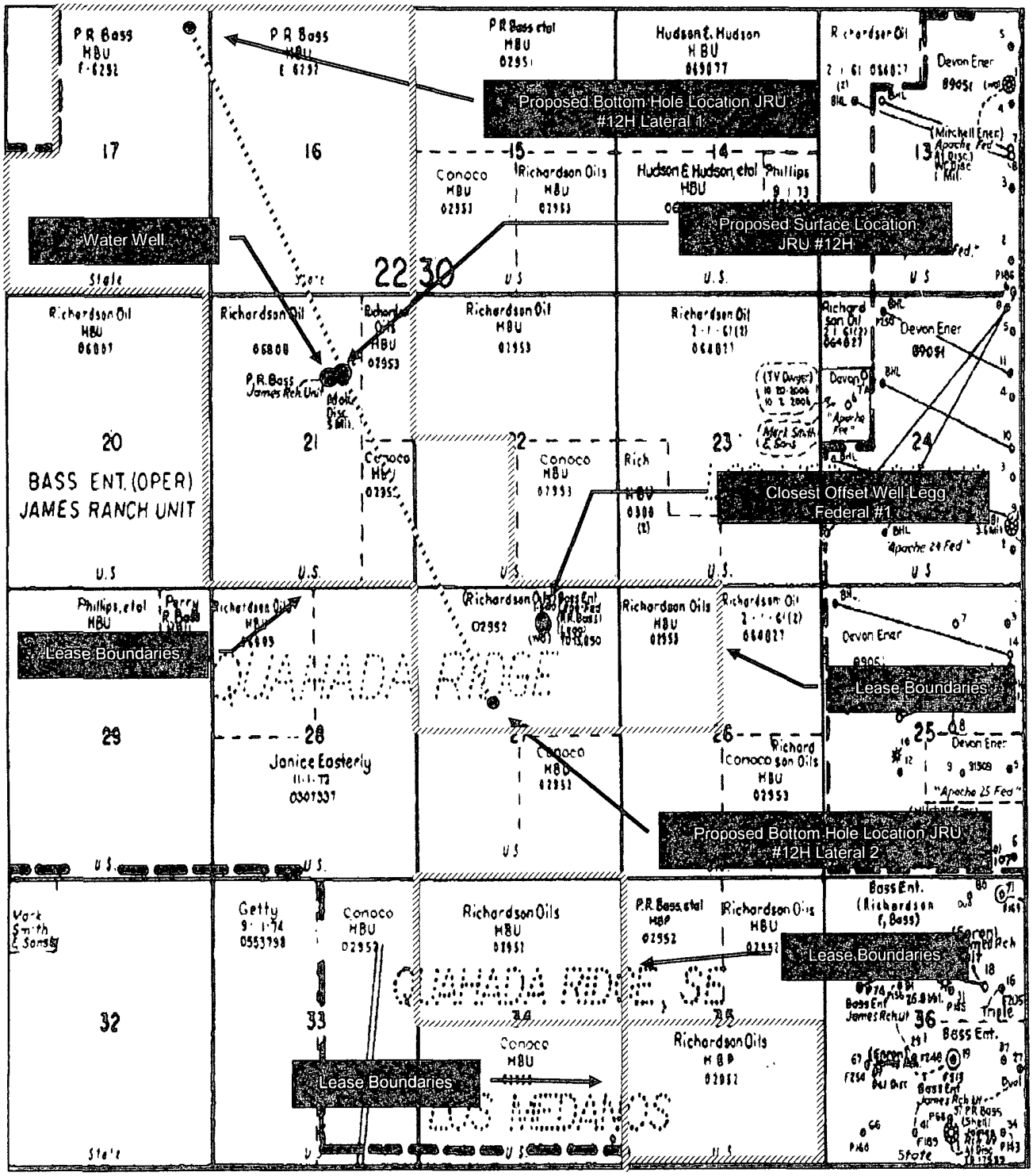


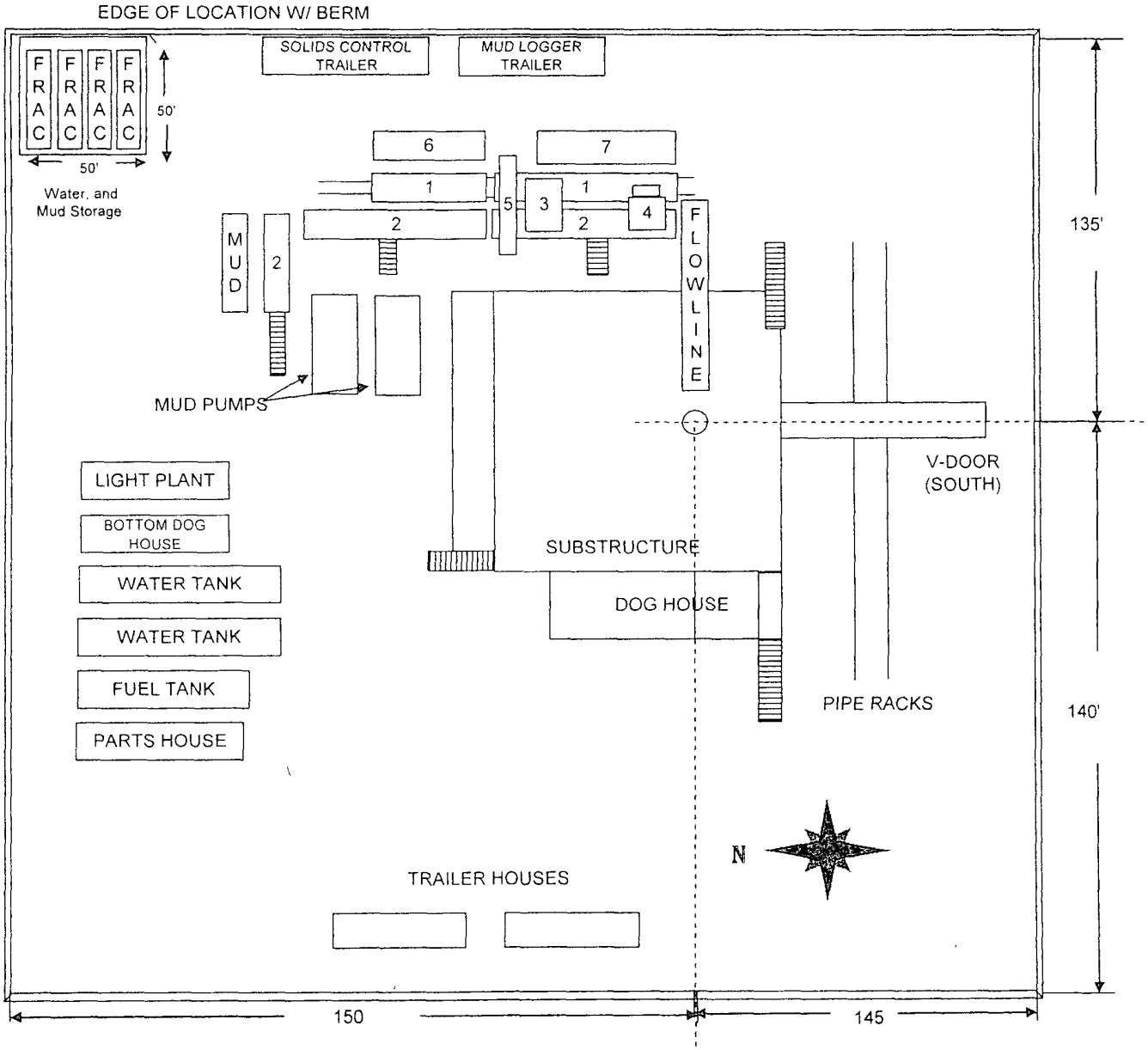
Exhibit "D"

BOPCO, L.P.
James Ranch Unit #12-1H and 2H
Section 21, T-22-S, R-30-E
Eddy County, NM

RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

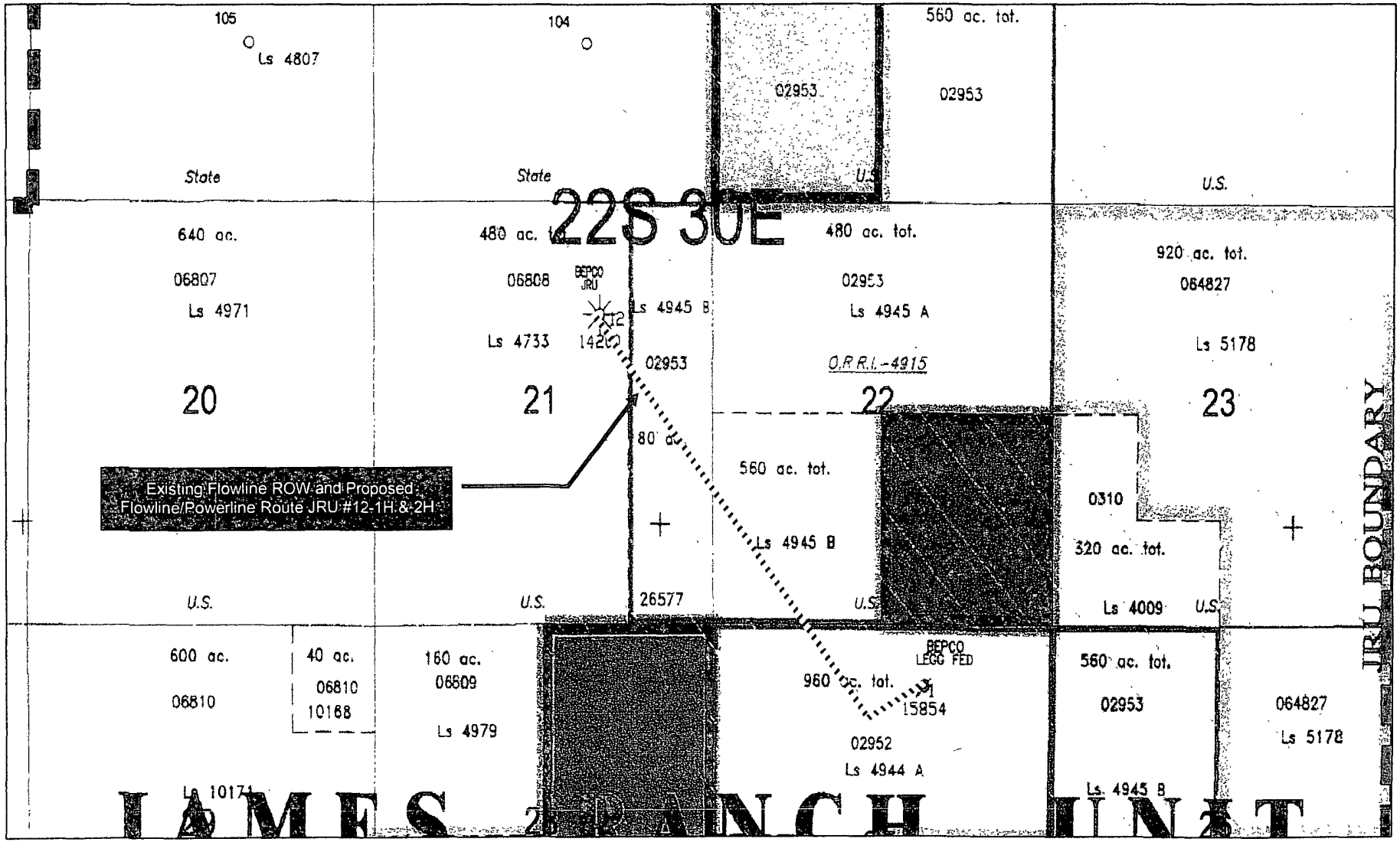
1) Roll Off Bin
2) Steel Tank
3) Mud Cleaner
4) Shaker
5) Centrifuge
6) Dewatering Unit
7) Catch Tank



James Ranch Unit #12-1H & 2H

Exhibit "E"

Flow Line Route



James Ranch Unit #12-1H & 2H
Exhibit "F"
Original Survey Plats

MEXICO OIL CONSERVATION COMMIS
WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section

Perry R. Bass		James Ranch		12
G	21	22 South	30 East	Eddy

1450 feet from the North line and 1830 feet from the East line

3161.8	Morrow	Wildcat	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

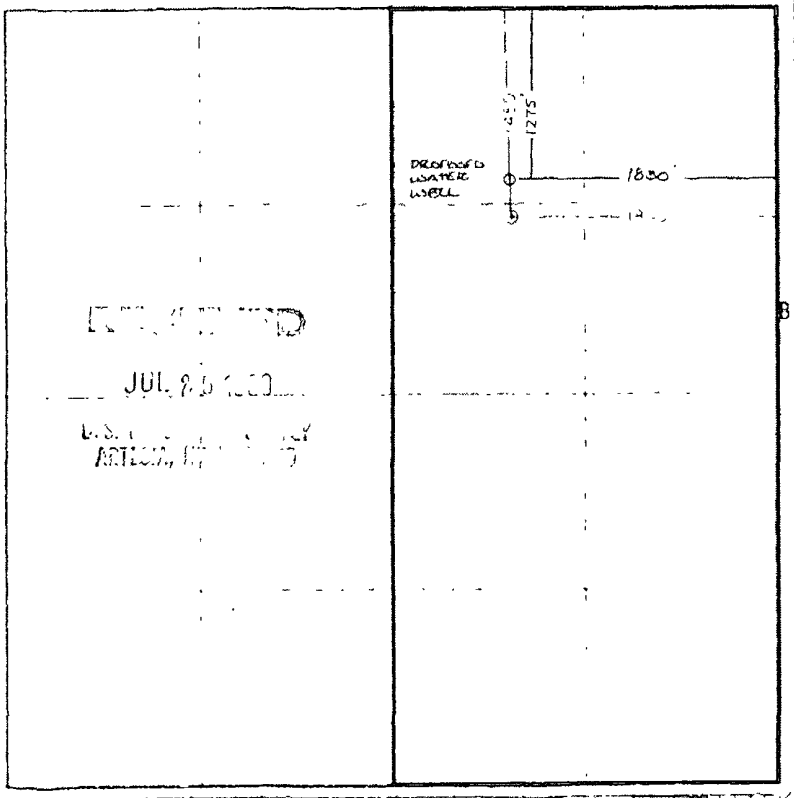
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

[X] Yes [ ] No If answer is "yes," type of consolidation Unit

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



RECEIVED
JUL 25 1980
O. C. D.
ARTESIA, N. M.

Mike Waygood

Mike Waygood
Engineering Assistant
Bass Enterprises Production Co.
April 8, 1980

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 knowledge and belief.

April 4, 1980

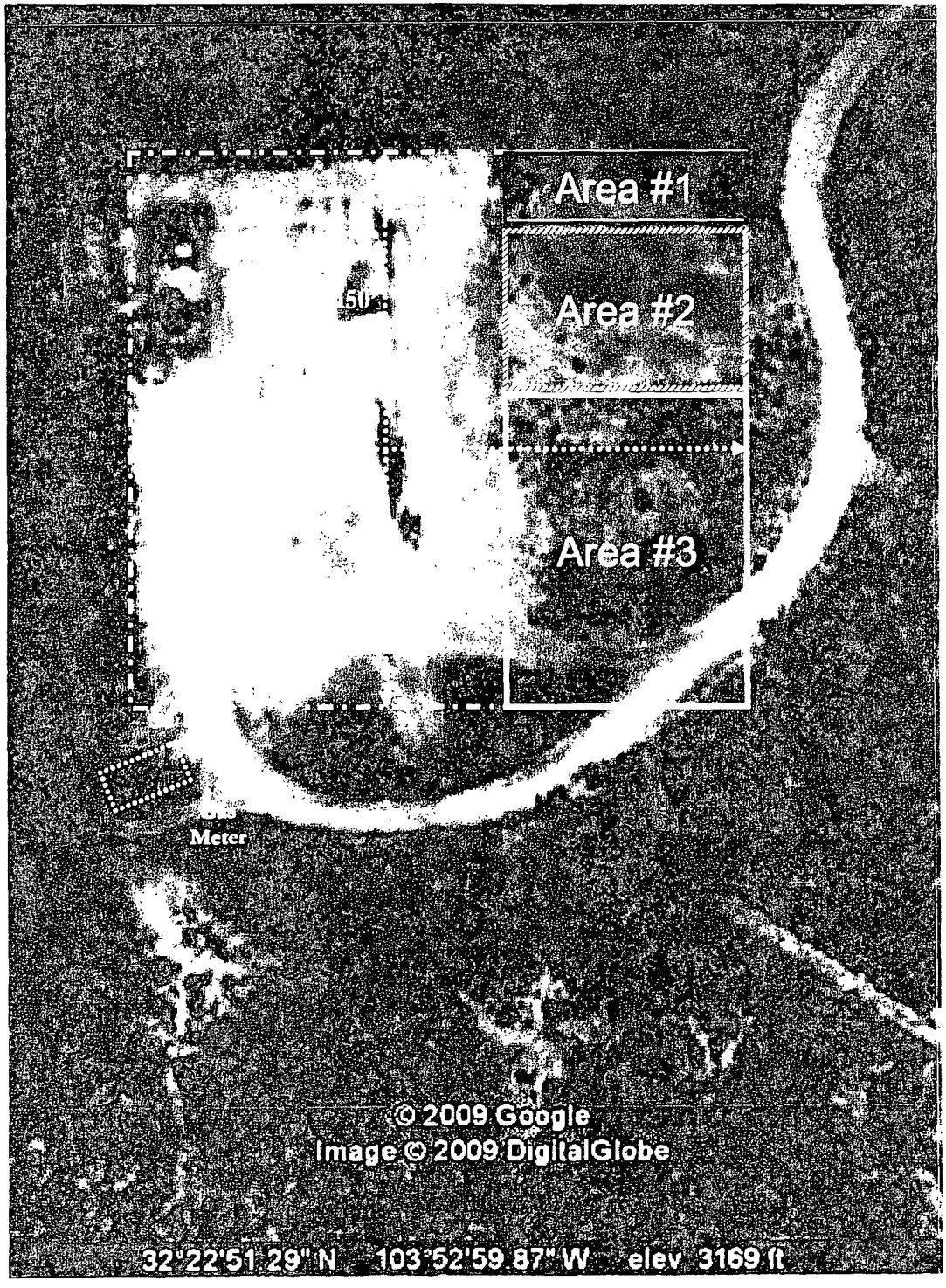
Date Surveyed

JOHN W. WEST 676
PATRICK A. ROMERO 6668
Ronald J. Eidson 3239

James Ranch Unit #12-1H & 2H

Exhibit "G"

Proposed Location Expansion



James Ranch Unit #12
Exhibit "H"

HYDROGEN SULFIDE (H_2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H_2S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - Detection of H_2S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

BOPCO L.P. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with

all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New México's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S CONTINGENCY PLAN EMERGENCY CONTACTS

BOPCO L.P. Midland Office 432-683-2277

Key Personnel

Name	Title	Cell Phone Number
Bill Dannels	Drilling Supt.	432-638-9463
Buddy Jenkins	Assistant Supt.	432-238-3295
Stephen Martinez	Engineer	432-556-0262
Gary Gerhard	Engineer	432-238-2197
Brian Hammit	Engineer	432-638-9460
Jordan Evans	Engineer	432-894-1392

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-8885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington, DC)	800-424-8802

Other

Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd PressureControl	432-580-3544 or 432-570-5300
Halliburton	575-746-2757
B. J. Services	575-746-3569
Flight For Life – 4000 24th St. Lubbock, Texas	806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas	806-747-8923
Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuq., NM	505-842-4433
S B Air Med Service – 2505 Clark Carr Loop SE, Albuq., NM	505-842-4949

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB** at **6400.00 MD**

REPORT SETUP INFORMATION

Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 2.0**
North Reference	**Grid**	User	**Victor Hernandez**
Scale	**0.999931**	Report Generated	**12/30/2009** at **4:10:45 PM**
Convergence at slot	**0.24° East**	Database/Source file	**WA_Midland/No._12-1H_PWB.xml**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[USft]**	**Northing[USft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	680202.40	502615.41	32°22'51.443"N	103°53'00.589"W
Facility Reference Pt			**680202.40**	**502615.41**	32°22'51.443"N	103°53'00.589"W
Field Reference Pt			**680202.40**	**502615.41**	32°22'51.443"N	103°53'00.589"W

WELLPATH DATUM

Calculation method	**Minimum curvature**	Rig on No. 12 SHL (RT) to GL	**19.00ft**
Horizontal Reference Pt	**Surface Location**	Rig on No. 12 SHL (RT) to Mean Sea Level	**3188.00ft**
Vertical Reference Pt	**Rig on No. 12 SHL (RT)**	GL to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No. 12 SHL (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**328.63°**

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6400.00 MD**

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
0.00	0.000	123 750	0 00	0.00	0.00	0 00	680202 40	502615 41	0 00	
100.00	1.430	123.750	99 99	-1 13	-0 69	1 04	680203 44	502614.72	1.43	
200 00	1 460	121 810	199.96	-3 40	-2 06	3.16	680205 56	502613.35	0.06	
300.00	1.130	110 900	299.93	-5.32	-3 08	5 16	680207 56	502612.33	0.41	
400.00	1.350	99.000	399.91	-6.64	-3.66	7.25	680209.65	502611.81	0.35	
500 00	1.040	93 850	499.89	-7 10	-2 62	9.33	680211.73	502612 79	0 64	
600.00	1.000	102 990	599 87	-8 23	-2.88	11.08	680213 48	502612.53	0.17	
700 00	0 980	110 730	699.86	-9 51	-3.38	12.73	680215.13	502612.03	0 14	
800 00	0.970	110 190	799.84	-10 85	-3 97	14.33	680216.73	502611.44	0.01	
900.00	1.050	113.730	899.83	-12.27	-4.64	15.96	680218.36	502610.77	0.10	
1000.00	1.170	116.220	999.81	-13 88	-5 46	17.72	680220 11	502609.95	0.13	
1100.00	1.210	117 350	1099.79	-15.64	-6.39	19.57	680221.97	502609 02	0.05	
1200.00	1 330	118.030	1199 76	-17 55	-7 42	21 53	680223 93	502607.99	0.12	
1300.00	1.330	118.810	1299 73	-19 55	-8.53	23.57	680225.97	502606.88	0.02	
1400.00	1.290	119.810	1399.71	-21.62	-9.69	25.59	680228.04	502605.73	0.08	
1500.00	1.320	115.880	1499.68	-23.65	-10.80	27.73	680230.13	502604.62	0.12	
1600.00	1.340	116 430	1599 65	-25.61	-11.82	29.81	680232.21	502603.59	0.02	
1700.00	1.360	116 980	1699 62	-27.61	-12.88	31 92	680234.32	502602 53	0.02	
1800.00	1.160	117.060	1799.60	-29 48	-13.88	33.88	680236.27	502601.53	0.20	
1900.00	0.840	116.350	1899.58	-30.96	-14.66	35.44	680237.83	502600.75	0.32	
2000.00	0.630	118.770	1999 58	-32.06	-15.25	36.58	680238.97	502600.16	0.21	
2100.00	0.740	106.940	2099.57	-33.02	-15.70	37.68	680240.07	502599.71	0.18	
2200.00	0.960	114.090	2199.56	-34.19	-16 23	39 06	680241 46	502599 18	0 24	
2300.00	0.880	112.870	2299 54	-35.50	-16.87	40.53	680242.93	502598.54	0.08	
2400.00	1.030	108.840	2399.53	-36.82	-17.46	42.05	680244.45	502597.95	0.16	
2500.00	1 030	108 210	2499.51	-38.19	-18.03	43.79	680246 19	502597 38	0.01	
2600.00	1.730	109 620	2599.48	-40 05	-18 82	46 07	680248 47	502596.59	0.70	
2700 00	2.920	116 040	2699 40	-43 37	-20 44	49 78	680252 18	502594 97	1.22	
2800 00	4.370	120.330	2799.20	-48.87	-23.49	55.36	680257.75	502591.93	1.47	
2900.00	4.640	118.490	2898.89	-55.72	-27.34	62.26	680264.66	502588.07	0.31	

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6400.00 MD**

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
3000.00	4.820	118.930	2998.55	-62.87	-31.30	69.43	680271.83	502584.11	0.18	
3100.00	4.770	120.720	3098.20	-70.19	-35.46	76.68	680279.08	502579.96	0.16	
3200.00	4.860	120.310	3197.84	-77.60	-39.72	83.91	680286.31	502575.69	0.10	
3300.00	4.680	121.330	3297.50	-84.95	-43.98	91.06	680293.45	502571.44	0.20	
3400.00	4.340	121.680	3397.19	-91.96	-48.00	97.58	680299.97	502567.41	0.34	
3500.00	4.110	125.140	3496.93	-98.62	-52.37	103.55	680305.94	502563.05	0.13	
3600.00	3.880	124.800	3596.69	-105.00	-56.36	109.26	680311.65	502559.05	0.23	
3700.00	3.780	124.660	3696.46	-111.11	-60.17	114.75	680317.14	502555.25	0.10	
3800.00	3.840	128.340	3796.24	-117.26	-64.12	120.09	680322.48	502551.30	0.25	
3900.00	3.610	127.610	3896.03	-123.24	-67.89	125.17	680327.56	502547.52	0.24	
4000.00	3.450	121.350	3995.84	-128.73	-71.16	130.59	680332.98	502544.26	0.18	
4100.00	3.940	121.210	4095.63	-134.46	-74.50	136.10	680338.49	502540.91	0.49	
4200.00	3.950	119.970	4195.40	-140.53	-78.00	142.02	680344.41	502537.41	0.09	
4300.00	3.650	119.730	4295.18	-146.34	-81.30	147.77	680350.15	502534.11	0.30	
4400.00	3.590	119.570	4394.98	-151.86	-84.38	153.28	680355.67	502531.04	0.06	
4500.00	3.420	118.150	4494.79	-157.12	-87.28	158.66	680361.05	502528.14	0.17	
4600.00	3.520	118.760	4594.61	-162.35	-90.16	163.98	680366.37	502525.25	0.11	
4700.00	3.270	119.600	4694.43	-167.50	-93.05	169.15	680371.54	502522.37	0.25	
4800.00	3.180	115.860	4794.27	-172.33	-95.67	174.13	680376.51	502519.75	0.23	
4900.00	3.210	116.080	4894.12	-177.02	-98.11	179.04	680381.43	502517.31	0.03	
5000.00	3.070	114.690	4993.97	-181.60	-100.46	184.09	680386.47	502514.96	0.16	
5100.00	2.820	114.880	5093.83	-185.87	-102.61	188.75	680391.14	502512.81	0.25	
5200.00	2.690	115.050	5193.72	-189.87	-104.64	193.11	680395.50	502510.78	0.13	
5300.00	2.530	117.340	5293.61	-193.71	-106.64	197.20	680399.58	502508.77	0.19	
5400.00	2.310	118.100	5393.52	-197.27	-108.56	201.10	680403.48	502506.86	0.23	
5500.00	2.010	114.460	5493.44	-200.60	-110.18	204.63	680407.02	502505.24	0.44	
5600.00	1.900	111.860	5593.39	-203.38	-111.52	207.77	680410.15	502503.89	0.14	
5700.00	1.820	109.480	5693.33	-205.94	-112.67	210.80	680413.19	502502.75	0.11	
5800.00	1.870	112.170	5793.28	-208.48	-113.82	213.81	680416.19	502501.60	0.10	
5900.00	1.840	113.670	5893.23	-211.14	-115.13	216.77	680419.15	502500.29	0.05	

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB** at **6400.00 MD**

WELLPATH DATA (149 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
6000.00	1 660	110 340	5993.18	-213.63	-116 33	219 57	680421.96	502499 09	0 24	
6100.00	1 480	116 020	6093 15	-215 85	-117.40	222 09	680424 48	502498 02	0.24	
6200.00	1 270	115 660	6193 12	-217 87	-118 44	224.25	680426 63	502496 98	0.21	
6300.00	1 280	114.860	6293.09	-219 73	-119.39	226 26	680428.65	502496 03	0.02	
6400.00	1.270	114.660	6393.07	-221.58	-120.32	228.28	680430.67	502495.09	0.01	tie On
6420.00	1.270	327 000	6413.06	-221 54	-120 23	228.36	680430.75	502495.19	12.20	EST KOP
6500 00†	3 790	327 000	6492.98	-218 01	-117.27	226 44	680428 83	502498 15	3.15	
6570.16	6 000	327.000	6562.88	-212.02	-112 25	223 18	680425.57	502503.17	3.15	END OF BUILD 6° INC
6600.00†	9 581	327.245	6592.44	-207.98	-108.85	220.99	680423.37	502506.57	12.00	
6700.00†	21 581	327.477	6688.89	-181.18	-86.26	206.54	680408.93	502519.35	12.00	
6800.00†	33 581	327.546	6777 06	-134.97	-47 28	181 73	680384.11	502568.13	12.00	
6900.00†	45 581	327.582	6854 00	-71 38	6.40	147 62	680350 01	502621 81	12.00	
7000 00†	57.581	327 606	6916 02	6 81	72 43	105.71	680308 10	502687.83	12.00	
7100.00†	69 581	327.624	6960 44	96 19	147.92	57 83	680260.22	502763 32	12.00	
7200.00†	81.581	327.649	6985.38	192.85	226.52	5.07	680208.47	502844.96	12.00	
7270 19	90.003	327.649	6990.44	262.78	288 65	-31 36	680171 05	502904.04	12.00	END OF CURVE
7300.00†	90.003	327 649	6990.44	292.58	313 83	-47.31	680155 10	502929 22	0.00	
7400.00†	90 003	327 649	6990.43	392.57	398.31	-100 82	680101.59	503013 69	0.00	
7500.00†	90.003	327.649	6990.42	492.55	482.79	-154.33	680048.08	503098.17	0.00	
7600.00†	90.003	327.649	6990.42	592.54	567.27	-207.84	679994.58	503182.64	0.00	
7700.00†	90 003	327 649	6990 41	692.52	651.75	-261 35	679941 07	503267 11	0.00	
7800 00†	90 003	327 649	6990 41	792 51	736.23	-314.86	679887 56	503351 58	0 00	
7900 00†	90 003	327 649	6990 40	892 49	820 71	-368.37	679834.06	503436 06	0.00	
8000.00†	90 003	327.649	6990.39	992 48	905.18	-421.88	679780 55	503520.53	0.00	
8100.00†	90.003	327.649	6990.39	1092.46	989.66	-475.39	679727.05	503605.01	0.00	
8200 00†	90 003	327.649	6990.38	1192.45	1074 14	-528.90	679673 54	503689 48	0 00	
8300 00†	90.003	327.649	6990.38	1292.43	1158 62	-582 41	679620 03	503773.95	0.00	
8400.00†	90.003	327.649	6990.37	1392.42	1243 10	-635 92	679566.53	503858.42	0.00	
8500.00†	90.003	327.649	6990.36	1492.41	1327 58	-689.43	679513.02	503942.89	0.00	
8600.00†	90.003	327.649	6990.36	1592.39	1412.06	-742.94	679459.51	504027.37	0.00	

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6400.00 MD**

WELLPATH DATA (149 stations) **† = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
8700.00†	90 003	327 649	6990.35	1692.38	1496 54	-796.45	679406.01	504111.84	0.00	
8800.00†	90.003	327.649	6990 35	1792 36	1581 01	-849.96	679352 50	504196.31	0.00	
8900.00†	90 003	327.649	6990.34	1892.35	1665 49	-903 47	679298.99	504280.79	0.00	
9000.00†	90 003	327 649	6990.33	1992 33	1749 97	-956.98	679245.49	504365.26	0.00	
9100.00†	90.003	327.649	6990.33	2092.32	1834.45	-1010.49	679191.98	504449.73	0.00	
9200.00†	90.003	327.649	6990.32	2192 30	1918 93	-1064.00	679138.48	504534.20	0.00	
9300 00†	90 003	327 649	6990 32	2292 29	2003 41	-1117 51	679084 97	504618 68	0.00	
9400 00†	90.003	327 649	6990 31	2392 27	2087.89	-1171 02	679031 46	504703 15	0 00	
9500.00†	90.003	327.649	6990.30	2492 26	2172 37	-1224 53	678977.96	504787.62	0.00	
9600.00†	90.003	327.649	6990.30	2592.25	2256.85	-1278.03	678924.45	504872.10	0.00	
9700.00†	90 003	327 649	6990 29	2692.23	2341 32	-1331.55	678870.94	504956.57	0 00	
9800.00†	90 003	327 649	6990.28	2792.22	2425.80	-1385.06	678817.44	505041.04	0 00	
9900.00†	90.003	327 649	6990.28	2892.20	2510.28	-1438.57	678763.93	505125 51	0.00	
10000.00†	90.003	327 649	6990.27	2992.19	2594.76	-1492.08	678710.43	505209.99	0.00	
10100.00†	90.003	327.649	6990.27	3092.17	2679.24	-1545.59	678656.92	505294.46	0.00	
10200.00†	90.003	327.649	6990.26	3192.16	2763 72	-1599 10	678603.41	505378.93	0.00	
10300.00†	90 003	327.649	6990.25	3292.14	2848 20	-1652.61	678549 91	505463.41	0 00	
10400.00†	90.003	327.649	6990 25	3392.13	2932 68	-1706.12	678496.40	505547.88	0.00	
10500.00†	90 003	327 649	6990 24	3492.11	3017 16	-1759 63	678442.89	505632.35	0.00	
10600.00†	90.003	327.649	6990.24	3592.10	3101.63	-1813.14	678389.39	505716.82	0.00	
10700.00†	90 003	327 649	6990.23	3692.08	3186.11	-1866.65	678335.88	505801.30	0.00	
10800.00†	90.003	327 649	6990.22	3792.07	3270 59	-1920.16	678282.38	505885.77	0.00	
10900.00†	90 003	327.649	6990.22	3892.06	3355.07	-1973.67	678228.87	505970.24	0.00	
11000.00†	90 003	327 649	6990.21	3992.04	3439 55	-2027 18	678175 36	506054.72	0 00	
11100.00†	90.003	327.649	6990.21	4092.03	3524.03	-2080.69	678121.86	506139.19	0.00	
11200.00†	90 003	327.649	6990.20	4192.01	3608 51	-2134 20	678068 35	506223.66	0.00	
11300.00†	90 003	327 649	6990 19	4292 00	3692 99	-2187.71	678014.84	506308.13	0.00	
11400 00†	90.003	327.649	6990.19	4391 98	3777 46	-2241.22	677961.34	506392.61	0 00	
11500.00†	90.003	327 649	6990 18	4491.97	3861 94	-2294.73	677907 83	506477.08	0.00	
11600.00†	90.003	327.649	6990.18	4591.95	3946 42	-2348.24	677854.33	506561.55	0.00	

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6400.00 MD**

WELLPATH DATA (149 stations) **† = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
11700.00†	90.003	327.649	6990 17	4691.94	4030.90	-2401.75	677800.82	506646.03	0.00	
11800.00†	90.003	327.649	6990 16	4791.92	4115.38	-2455 26	677747.31	506730.50	0.00	
11900.00†	90 003	327.649	6990 16	4891.91	4199.86	-2508.77	677693.81	506814.97	0.00	
12000.00†	90.003	327.649	6990 15	4991.89	4284.34	-2562 28	677640.30	506899.44	0.00	
12100.00†	90.003	327.649	6990.15	5091.88	4368.82	-2615.79	677586.79	506983.92	0.00	
12200.00†	90.003	327.649	6990.14	5191 87	4453.30	-2669.30	677533 29	507068.39	0 00	
12300.00†	90.003	327.649	6990 13	5291.85	4537 77	-2722 81	677479.78	507152.86	0 00	
12400.00†	90.003	327.649	6990 13	5391 84	4622 25	-2776.32	677426.28	507237.34	0.00	
12500.00†	90.003	327.649	6990.12	5491 82	4706.73	-2829.83	677372.77	507321.81	0.00	
12600.00†	90.003	327.649	6990 11	5591.81	4791.21	-2883.34	677319.26	507406.28	0.00	
12700.00†	90.003	327.649	6990 11	5691 79	4875 69	-2936.85	677265.76	507490 75	0 00	
12800 00†	90 003	327.649	6990.10	5791 78	4960 17	-2990.36	677212.25	507575 23	0 00	
12900 00†	90.003	327 649	6990 10	5891 76	5044 65	-3043 87	677158 74	507659.70	0.00	
13000.00†	90.003	327.649	6990.09	5991 75	5129.13	-3097.38	677105 24	507744.17	0.00	
13100.00†	90.003	327.649	6990.08	6091.73	5213.60	-3150.89	677051.73	507828.65	0.00	
13200.00†	90.003	327 649	6990 08	6191 72	5298 08	-3204.40	676998.23	507913.12	0.00	
13300 00†	90.003	327.649	6990 07	6291 70	5382.56	-3257.91	676944.72	507997.59	0.00	
13400.00†	90.003	327.649	6990.07	6391 69	5467 04	-3311.42	676891.21	508082.06	0 00	
13500.00†	90.003	327.649	6990.06	6491 68	5551.52	-3364.93	676837.71	508166.54	0.00	
13600.00†	90.003	327.649	6990.05	6591.66	5636.00	-3418.44	676784.20	508251.01	0.00	
13700 00†	90 003	327.649	6990 05	6691 65	5720 48	-3471 95	676730 69	508335 48	0 00	
13800.00†	90.003	327.649	6990.04	6791.63	5804.96	-3525.46	676677.19	508419 96	0.00	
13900.00†	90.003	327.649	6990.04	6891.62	5889 44	-3578.97	676623.68	508504.43	0 00	
14000.00†	90.003	327.649	6990 03	6991.60	5973.91	-3632.48	676570.17	508588.90	0.00	
14100.00†	90.003	327.649	6990.01	7091.59	6058.39	-3685.99	676516.67	508673.38	0.00	
14200.00†	90.003	327 649	6990 02	7191 57	6142.87	-3739.50	676463 16	508757.85	0 00	
14300.00†	90.003	327 649	6990 01	7291 56	6227 35	-3793 01	676409 66	508842.32	0.00	
14400.00†	90 003	327.649	6990 01	7391.54	6311 83	-3846.52	676356 15	508926.79	0 00	
14496 75	90 003	327 649	6990.001	7488 28	6391.56	-3898.29	676308.38	509008.52	0 00	No 12-1H PBHL

Planned Wellpath Report

Prelim_3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-1H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-1H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6400.00 MD**

HOLE & CASING SECTIONS Ref Wellbore: No. 12-1H PWB Ref Wellpath: Prelim_3

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	0.00	6400.00	6400.00	0.00	6393.07	0.00	0.00	-120.32	228.28
6.125in Open Hole	6400.00	14496.75	8096.75	6393.07	NA	-120.32	228.28	NA	NA

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 12-1H PBHL	14496.75	[illegible]	[illegible]	[illegible]	676304.32	[illegible]	[illegible]	[illegible]	point

SURVEY PROGRAM Ref Wellbore: No. 12-1H PWB Ref Wellpath: Prelim_3

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	6400.00	Gyrodata standard - Drop gyro or Multi-shot		No. 12 AWB
6400.00	14496.75	NaviTrak (Standard)		No. 12-1H PWB

BOPCO, L.P.

Location Eddy County, NM
Field James Ranch Unit 12 DL
Facility James Ranch Unit 12

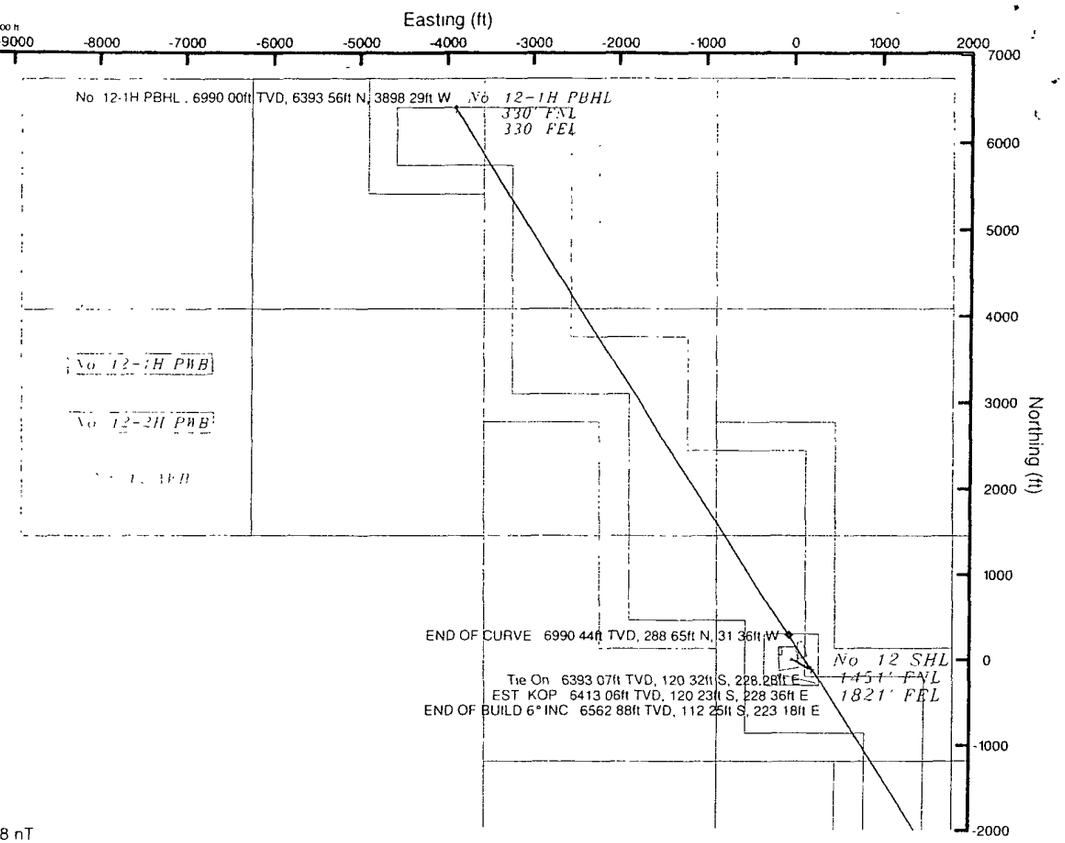
Slot No 12 SHL
Well No 12-1H
Wellbore No. 12-1H PWB

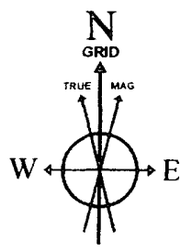
BAKER HUGHES INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6400 00	1 270	114 660	6393 07	-120 32	228.28	0.01	-221 58
EST. KOP	6420 00	1 270	327.000	6413 06	-120 23	228.36	12 20	-221.54
END OF BUILD 6° INC	6570 16	6 000	327 000	6562 88	-112 25	223 18	3 15	-212 02
END OF CURVE	7270 19	90 003	327.649	6990 44	288 65	-31 36	12 00	262 78
No. 12-1H PBHL	14496.75	90.003	327.649	6990.00	6393 56	-3898 29	0 00	7488 28

Plot reference wellpath is Prelim_3	
True vertical depths are referenced to Rig on No 12 SHL (RT)	Grid System NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 12 SHL (RT)	North Reference Grid north
Rig on No 12 SHL (RT) to Mean Sea Level 3188 feet	Scale True distance
Mean Sea Level to Mud line (Facility James Ranch Unit 12) -3169 feet	Depths are in feet
Coordinates are in feet referenced to Surface Location	Created by Victor Hernandez on 12/30/2009





BGGM (1945 0 to 2011 0) Dip 60 33° Field 48883 8 nT
Magnetic North is 7 97 degrees East of True North (at 12/23/2009)
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 72 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 72 = 97 72

Planned Wellpath Report

Prelim_4

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB** at **6500.00 MD**

REPORT SETUP INFORMATION

Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 2.0**
North Reference	**Grid**	User	**Victor Hernandez**
Scale	**0.999931**	Report Generated	**12/30/2009** at **4:33:21 PM**
Convergence at slot	**0.24° East**	Database/Source file	**WA_Midland/No._12-2H_PWB.xml**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[USft]**	**Northing[USft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	680202.40	502615.41	32°22'51.443"N	103°53'00.589"W
Facility Reference Pt			**680202.40**	**502615.41**	32°22'51.443"N	103°53'00.589"W
Field Reference Pt			**680202.40**	**502615.41**	32°22'51.443"N	103°53'00.589"W

WELLPATH DATUM

Calculation method	**Minimum curvature**	Rig on No. 12 SHL (RT) to GL	**19.00ft**
Horizontal Reference Pt	**Surface Location**	Rig on No. 12 SHL (RT) to Mean Sea Level	**3188.00ft**
Vertical Reference Pt	**Rig on No. 12 SHL (RT)**	GL to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No. 12 SHL (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**147.24°**

Planned Wellpath Report

Prelim_4

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6500.00 MD**

WELLPATH DATA (146 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
0.00	0 000	123.750	0 00	0.00	0.00	0 00	680202.40	502615 41	0.00	
100.00	1.430	123.750	99.99	1.14	-0.69	1 04	680203.44	502614.72	1 43	
200 00	1.460	121 810	199 96	3 44	-2 06	3 16	680205.56	502613.35	0 06	
300.00	1.130	110.900	299 93	5.38	-3 08	5 16	680207.56	502612 33	0.41	
400.00	1.140	99.600	399 91	6.85	-3.00	7.05	680209.45	502612.41	0.95	
500.00	1 040	93.850	499 89	7 25	-2.62	9.33	680211.73	502612.79	0.64	
600.00	1.000	102.990	599 87	8 42	-2 88	11 08	680213.48	502612.53	0.17	
700 00	0 980	110.730	699 86	9 73	-3 38	12.73	680215.13	502612.03	0.14	
800.00	0.970	110.190	799 84	11.10	-3.97	14 33	680216.73	502611.44	0.01	
900.00	1.090	113.730	899 83	12.64	-4.64	15.96	680218.36	502610.77	0.30	
1000.00	1.170	116.220	999 81	14.17	-5 46	17.72	680220.11	502609 95	0.13	
1100.00	1.210	117 350	1099 79	15.96	-6.39	19.57	680221.97	502609 02	0.05	
1200.00	1.330	118.030	1199 76	17.89	-7.42	21.53	680223 93	502607.99	0.12	
1300.00	1.330	118.810	1299 73	19 93	-8.53	23.57	680225 97	502606.88	0 02	
1400.00	1.400	119.840	1399 71	22.06	-9.69	25.66	680228.04	502605.71	0.08	
1500.00	1 320	115.880	1499.68	24 08	-10.80	27.73	680230.13	502604.62	0.12	
1600.00	1 340	116.430	1599.65	26 07	-11 82	29.81	680232.21	502603.59	0.02	
1700.00	1.360	116.980	1699.62	28.10	-12 88	31 92	680234.32	502602.53	0.02	
1800.00	1.160	117.060	1799 60	30 00	-13.88	33.88	680236.27	502601.53	0.20	
1900.00	0.840	118.150	1899.58	31.56	-14.66	35.44	680237.83	502600.75	0.32	
2000.00	0 630	118 770	1999.58	32.62	-15 25	36 58	680238 97	502600.16	0.21	
2100 00	0 740	106 940	2099 57	33 59	-15 70	37 68	680240 07	502599.71	0.18	
2200 00	0 960	114 090	2199 56	34 79	-16 23	39 06	680241.46	502599.18	0 24	
2300.00	0 880	112.870	2299 54	36.12	-16 87	40 53	680242.93	502598.54	0 08	
2400.00	1.030	108.84	2399 53	37.46	-17.46	42.09	680244.49	502597.95	0.16	
2500.00	1.030	108.210	2499 51	38 86	-18 03	43 79	680246.19	502597.38	0.01	
2600.00	1.730	109.620	2599 48	40.76	-18.82	46 07	680248 47	502596 59	0.70	
2700.00	2.920	116 040	2699.40	44.13	-20 44	49 78	680252.18	502594.97	1.22	
2800.00	4.370	120.330	2799 20	49 71	-23 49	55.36	680257 75	502591.93	1.47	
2900.00	4.640	118.490	2898.89	56.65	-27.44	62.20	680264 60	502588.01	0.31	

Planned Wellpath Report

Prelim_4

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6500.00 MD**

WELLPATH DATA (146 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
3000.00	4.820	118.930	2998 55	63 90	-31.30	69.43	680271 83	502584.11	0.18	
3100.00	4.770	120 720	3098 20	71.31	-35.46	76.68	680279.08	502579.96	0.16	
3200 00	4.860	120 310	3197 84	78.81	-39 72	83.91	680286 31	502575 69	0 10	
3300.00	4 680	121.330	3297.50	86.26	-43 98	91.06	680293.45	502571.44	0.20	
3400.00	4.340	123.650	3397.19	93.28	-48.10	97.58	680299.97	502567.33	0.51	
3500.00	4.110	125.140	3496.93	100.08	-52 37	103.55	680305 94	502563.05	0 13	
3600.00	3.880	124.800	3596.69	106.52	-56 36	109.26	680311.65	502559.05	0.23	
3700 00	3.780	124 660	3696 46	112 69	-60 17	114.75	680317 14	502555 25	0.10	
3800.00	3 840	128.340	3796.24	118.91	-64 12	120.09	680322 48	502551.30	0.25	
3900.00	3.610	122.610	3896.03	124.94	-67.87	125.37	680327.76	502547.52	0.44	
4000.00	3 450	121 350	3995.84	130 50	-71.16	130.59	680332.98	502544.26	0 18	
4100.00	3 940	121.210	4095 63	136 30	-74.50	136.10	680338.49	502540 91	0.49	
4200 00	3 950	119.970	4195.40	142 45	-78.00	142.02	680344.41	502537 41	0.09	
4300.00	3.650	119.730	4295.18	148.33	-81.30	147.77	680350.15	502534.11	0.30	
4400.00	3.590	118.500	4394.98	153.90	-84.48	153.28	680355.67	502530.93	0.10	
4500.00	3.420	118.150	4494 79	159 26	-87.28	158.66	680361 05	502528 14	0.17	
4600.00	3 520	118 760	4594.61	164 56	-90 16	163.98	680366.37	502525.25	0.11	
4700.00	3 270	119.600	4694 43	169.79	-93.05	169.15	680371.54	502522.37	0.25	
4800.00	3.180	115 860	4794.27	174.68	-95.67	174.13	680376.51	502519.75	0.23	
4900.00	3.310	116.040	4894 12	179.44	-98.11	179.14	680381.53	502517.31	0.03	
5000.00	3.070	114.690	4993.97	184 10	-100.46	184.09	680386.47	502514.96	0.16	
5100.00	2.820	114.880	5093.83	188 43	-102 61	188.75	680391 14	502512.81	0.25	
5200.00	2.690	115.050	5193.72	192.49	-104.64	193 11	680395.50	502510 78	0.13	
5300 00	2 530	117 340	5293.61	196.39	-106 64	197.20	680399.58	502508 77	0.19	
5400.00	2.430	114.800	5393.52	200.11	-108.56	201.10	680403.48	502506.86	0.15	
5500.00	2.010	114 460	5493.44	203 39	-110.18	204 63	680407.02	502505.24	0.44	
5600.00	1.900	111.860	5593 39	206 22	-111 52	207 77	680410.15	502503 89	0 14	
5700 00	1 820	109 480	5693 33	208 83	-112.67	210 80	680413 19	502502.75	0 11	
5800 00	1.870	112 170	5793 28	211.42	-113 82	213 81	680416.19	502501.60	0 10	
5900.00	1.840	115.670	5893.23	214.12	-115.13	216.77	680419.15	502500.30	0.13	

Planned Wellpath Report

Prelim_4

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6500.00 MD**

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
6000.00	1.660	110.340	5993.18	216.65	-116.33	219.57	680421.96	502499.09	0.24	
6100.00	1.480	116.020	6093.15	218.91	-117.40	222.09	680424.48	502498.02	0.24	
6200.00	1.270	115.660	6193.12	220.96	-118.44	224.25	680426.63	502496.98	0.21	
6300.00	1.280	114.860	6293.09	222.84	-119.39	226.26	680428.65	502496.03	0.02	
6400.00	1.270	114.860	6393.07	224.73	-120.42	228.28	680430.67	502495.02	0.01	
6500.00	1.080	119.900	6493.05	226.49	-121.26	230.11	680432.49	502494.16	0.00	Tie On
6587.00	1.000	119.900	6580.03	227.90	-122.04	231.48	680433.86	502493.37	0.09	EST KOP
6600.00†	2.486	137.248	6593.03	228.27	-122.31	231.77	680434.15	502493.11	12.00	
6700.00†	14.448	146.413	6691.76	242.94	-134.34	240.17	680442.55	502481.08	12.00	
6800.00†	26.438	147.307	6785.22	277.80	-168.57	259.17	680461.55	502446.86	12.00	
6900.00†	38.442	147.659	6869.53	331.35	-208.74	287.93	680490.31	502406.69	12.00	
7000.00†	50.442	147.865	6940.79	401.24	-267.86	325.20	680527.58	502347.57	12.00	
7100.00†	62.441	148.009	6995.97	484.41	-338.36	369.35	680571.73	502277.07	12.00	
7200.00†	74.441	148.125	7032.65	577.24	-417.15	418.45	680620.82	502198.29	12.00	
7300.00†	86.440	148.228	7049.13	675.05	-500.78	470.35	680672.72	502114.66	12.00	
7329.68	90.001	148.257	7050.15	705.31	-526.00	485.96	680688.33	502089.45	12.00	END OF CURVE
7400.00†	90.001	148.257	7050.15	775.62	-585.80	522.96	680725.32	502029.65	0.00	
7500.00†	90.001	148.257	7050.14	875.60	-670.85	575.57	680777.93	501944.61	0.00	
7600.00†	90.001	148.257	7050.14	975.59	-755.89	628.18	680830.54	501859.58	0.00	
7700.00†	90.001	148.257	7050.14	1075.57	-840.93	680.79	680883.15	501774.54	0.00	
7800.00†	90.001	148.257	7050.14	1175.56	-925.97	733.40	680935.75	501689.50	0.00	
7900.00†	90.001	148.257	7050.14	1275.54	-1011.01	786.01	680988.36	501604.47	0.00	
8000.00†	90.001	148.257	7050.13	1375.52	-1096.05	838.63	681040.97	501519.43	0.00	
8100.00†	90.001	148.257	7050.13	1475.51	-1181.10	891.24	681093.57	501434.40	0.00	
8200.00†	90.001	148.257	7050.13	1575.49	-1266.14	943.85	681146.18	501349.36	0.00	
8300.00†	90.001	148.257	7050.13	1675.48	-1351.18	996.46	681198.79	501264.33	0.00	
8400.00†	90.001	148.257	7050.12	1775.46	-1436.22	1049.07	681251.39	501179.29	0.00	
8500.00†	90.001	148.257	7050.12	1875.45	-1521.26	1101.68	681304.00	501094.25	0.00	
8600.00†	90.001	148.257	7050.12	1975.43	-1606.31	1154.29	681356.61	501009.22	0.00	
8700.00†	90.001	148.257	7050.12	2075.41	-1691.35	1206.90	681409.21	500924.18	0.00	

Planned Wellpath Report

Prelim_4

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB at 6500.00 MD**

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
8800.00†	90 001	148.257	7050 12	2175.40	-1776 39	1259.51	681461.82	500839.15	0.00	
8900.00†	90 001	148 257	7050 11	2275 38	-1861 43	1312 12	681514 43	500754.11	0.00	
9000.00†	90 001	148 257	7050 11	2375.37	-1946.47	1364.73	681567 04	500669.07	0 00	
9100.00†	90.001	148 257	7050.11	2475 35	-2031.52	1417 34	681619.64	500584.04	0.00	
9200.00†	90.001	148.257	7050.11	2575.33	-2116.56	1469.95	681672.25	500499.00	0.00	
9300.00†	90 001	148.257	7050 11	2675.32	-2201 60	1522 56	681724 86	500413 97	0.00	
9400.00†	90 001	148.257	7050 10	2775.30	-2286 64	1575 17	681777 46	500328.93	0 00	
9500.00†	90 001	148.257	7050 10	2875 29	-2371.68	1627.79	681830 07	500243 90	0.00	
9600.00†	90.001	148.257	7050.10	2975.27	-2456.72	1680.40	681882.68	500158 86	0.00	
9700.00†	90.001	148.257	7050.10	3075.26	-2541.77	1733.01	681935.28	500073.82	0.00	
9800.00†	90 001	148.257	7050.09	3175.24	-2626.81	1785.62	681987 89	499988 79	0.00	
9900.00†	90.001	148 257	7050.09	3275.22	-2711.85	1838 23	682040.50	499903.75	0 00	
10000.00†	90.001	148 257	7050.09	3375 21	-2796.89	1890.84	682093 10	499818.72	0.00	
10100.00†	90.001	148 257	7050.09	3475 19	-2881.93	1943.45	682145.71	499733.68	0.00	
10200.00†	90.001	148.257	7050.09	3575.18	-2966.98	1996.06	682198.32	499648.64	0.00	
10300.00†	90.001	148.257	7050.08	3675.16	-3052.02	2048 67	682250.93	499563.61	0.00	
10400.00†	90.001	148.257	7050.08	3775.14	-3137.06	2101.28	682303 53	499478.57	0.00	
10500 00†	90.001	148.257	7050.08	3875 13	-3222.10	2153.89	682356.14	499393 54	0.00	
10600.00†	90.001	148.257	7050.08	3975.11	-3307.14	2206.50	682408.75	499308.50	0.00	
10700.00†	90.001	148.257	7050.08	4075.10	-3392.18	2259.11	682461.35	499223.46	0.00	
10800 00†	90.001	148.257	7050.07	4175.08	-3477.23	2311.72	682513 96	499138.43	0.00	
10900.00†	90.001	148 257	7050.07	4275 07	-3562.27	2364.33	682566.57	499053.39	0.00	
11000.00†	90 001	148 257	7050 07	4375 05	-3647 31	2416.94	682619 17	498968 36	0.00	
11100.00†	90.001	148.257	7050.07	4475.03	-3732 35	2469 56	682671.78	498883.32	0.00	
11200.00†	90.001	148.257	7050.07	4575.02	-3817.39	2522.17	682724.39	498798.28	0.00	
11300.00†	90 001	148.257	7050 06	4675 00	-3902 44	2574 78	682776 99	498713 25	0.00	
11400.00†	90 001	148 257	7050 06	4774.99	-3987.48	2627 39	682829 60	498628.21	0.00	
11500 00†	90.001	148 257	7050.06	4874 97	-4072 52	2680 00	682882 21	498543 18	0 00	
11600.00†	90.001	148 257	7050.06	4974 95	-4157 56	2732.61	682934 81	498458.14	0.00	
11700.00†	90.001	148.257	7050.05	5074.94	-4242.60	2785.22	682987.42	498373.11	0.00	

BAKER HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12**	Sidetrack from	**No. 12 AWB** at **6500.00 MD**

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	DLS [°/100ft]	Comments
11800.00†	90.001	148.257	7050.05	5174.92	-4327.65	2837.83	683040.03	498288.07	0.00	
11900.00†	90.001	148.257	7050.05	5274.91	-4412.69	2890.44	683092.64	498203.03	0.00	
12000.00†	90.001	148.257	7050.05	5374.89	-4497.73	2943.05	683145.24	498118.00	0.00	
12100.00†	90.001	148.257	7050.05	5474.88	-4582.77	2995.66	683197.85	498032.96	0.00	
12200.00†	90.001	148.257	7050.04	5574.86	-4667.81	3048.27	683250.46	497947.93	0.00	
12300.00†	90.001	148.257	7050.04	5674.84	-4752.86	3100.88	683303.06	497862.89	0.00	
12400.00†	90.001	148.257	7050.04	5774.83	-4837.90	3153.49	683355.67	497777.86	0.00	
12500.00†	90.001	148.257	7050.04	5874.81	-4922.94	3206.10	683408.28	497692.82	0.00	
12600.00†	90.001	148.257	7050.04	5974.80	-5007.98	3258.71	683460.88	497607.78	0.00	
12700.00†	90.001	148.257	7050.03	6074.78	-5093.02	3311.33	683513.49	497522.75	0.00	
12800.00†	90.001	148.257	7050.03	6174.76	-5178.06	3363.94	683566.10	497437.71	0.00	
12900.00†	90.001	148.257	7050.03	6274.75	-5263.11	3416.55	683618.70	497352.68	0.00	
13000.00†	90.001	148.257	7050.03	6374.73	-5348.15	3469.16	683671.31	497267.64	0.00	
13100.00†	90.001	148.257	7050.03	6474.72	-5433.19	3521.77	683723.92	497182.60	0.00	
13200.00†	90.001	148.257	7050.02	6574.70	-5518.23	3574.38	683776.53	497097.57	0.00	
13300.00†	90.001	148.257	7050.02	6674.68	-5603.27	3626.99	683829.13	497012.53	0.00	
13400.00†	90.001	148.257	7050.02	6774.67	-5688.32	3679.60	683881.74	496927.50	0.00	
13500.00†	90.001	148.257	7050.02	6874.65	-5773.36	3732.21	683934.35	496842.46	0.00	
13600.00†	90.001	148.257	7050.01	6974.64	-5858.40	3784.82	683986.95	496757.43	0.00	
13700.00†	90.001	148.257	7050.01	7074.62	-5943.44	3837.43	684039.56	496672.39	0.00	
13800.00†	90.001	148.257	7050.01	7174.61	-6028.48	3890.04	684092.17	496587.35	0.00	
13900.00†	90.001	148.257	7050.01	7274.59	-6113.53	3942.65	684144.77	496502.32	0.00	
14000.00†	90.001	148.257	7050.01	7374.57	-6198.57	3995.26	684197.38	496417.28	0.00	
14100.00†	90.001	148.257	7050.00	7474.56	-6283.61	4047.87	684249.99	496332.25	0.00	
14200.00†	90.001	148.257	7050.00	7574.54	-6368.65	4100.48	684302.59	496247.21	0.00	
14295.14	90.001	148.257	7050.00	7669.67	-6449.58	4150.52	684352.63	496166.30	0.00	No 12-2H PBHL

Planned Wellpath Report

Prelim_4

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 12 SHL**
Area	**Eddy County, NM**	Well	**No. 12-2H**
Field	**James Ranch Unit 12 DL**	Wellbore	**No. 12-2H PWB**
Facility	**James Ranch Unit 12 .**	Sidetrack from	**No. 12 AWB at 6500.00 MD**

HOLE & CASING SECTIONS Ref Wellbore: No. 12-2H PWB Ref Wellpath: Prelim_4

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	0 00	6500.00	6500.00	0.00	6493.05	0.00	0.00	-121.26	230.11
6.125in Open Hole	6500.00	14295.14	7795.14	6493.05	7050.00	-121.26	230 11	-6449.56	4150 54

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 12-2H PBHL	14295.14	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	point

SURVEY PROGRAM Ref Wellbore: No. 12-2H PWB Ref Wellpath: Prelim_4

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	6500.00	Gyrodata standard - Drop gyro or Multi-shot		No. 12 AWB
6500.00	14295.14	NaviTrak (Standard)		No. 12-2H PWB

BOPCO, L.P.

Location Eddy County, NM
Field James Ranch Unit 12 DL
Facility James Ranch Unit 12

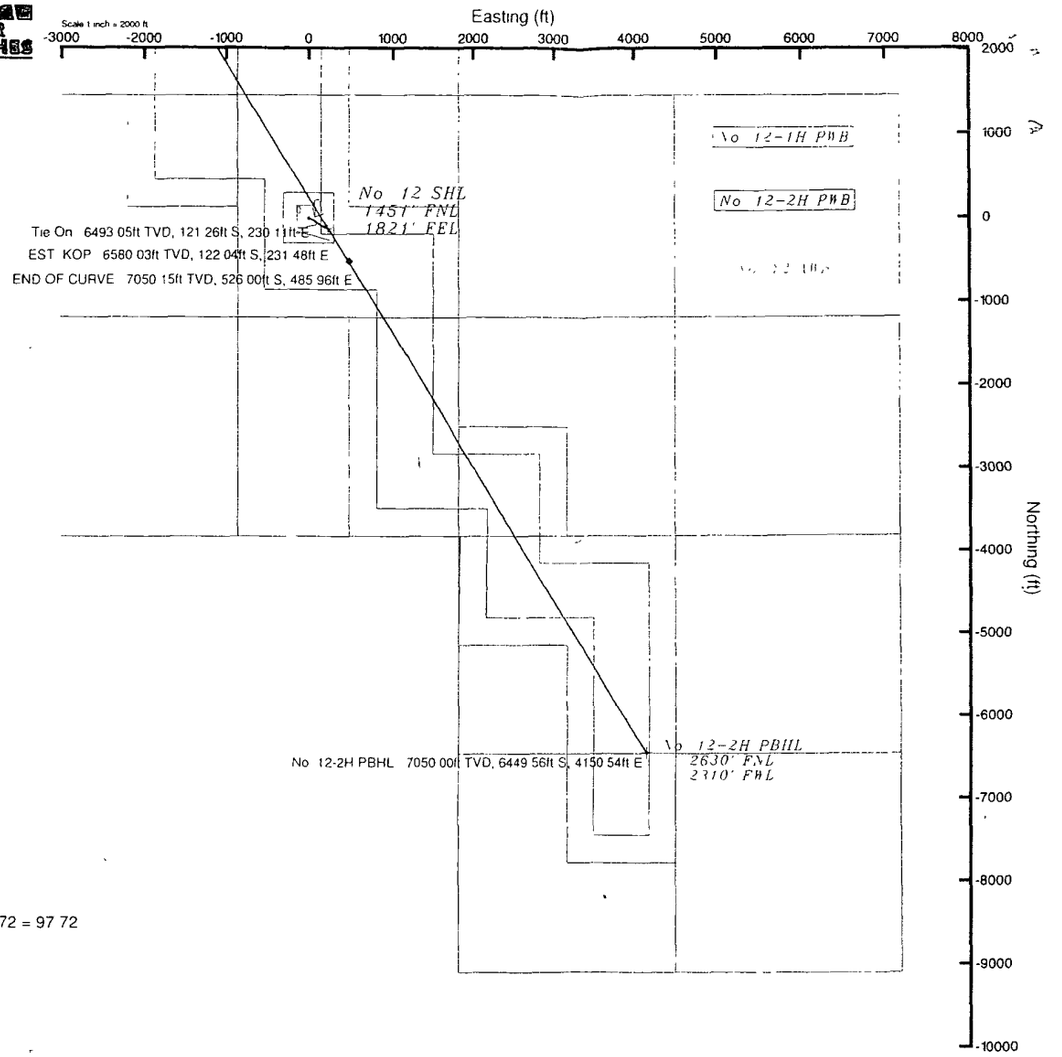
Slot No. 12 SHL
Well No 12-2H
Wellbore No 12-2H PWB

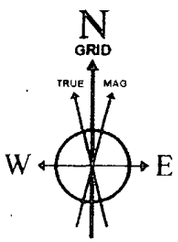
BAKER HUGHES INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6500 00	1 080	119 900	6493 05	-121 26	230 11	0 00	226 49
EST KOP	6587 00	1 000	119 900	6580 03	-122 04	231 48	0 09	227 90
END OF CURVE	7329 68	90 001	148 257	7050 15	-526 00	485 96	12 00	705 31
No 12-2H PBHL	14295 14	90 001	148 257	7050 00	-6449 56	4150 54	0 00	7669 67

Plot reference wellpath is Prelim_4	
True vertical depths are referenced to Rig on No 12 SHL (RT)	Grid System NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 12 SHL (RT)	North Reference Grid north
Rig on No 12 SHL (RT) to Mean Sea Level 3188 feet	Scale True distance
Mean Sea Level to Mud line (Facility James Ranch Unit 12) 3169 feet	Depths are in feet
Coordinates are in feet referenced to Surface Location	*Created by Victor Hernandez on 12/30/2009*





BGGM (1945 0 to 2011 0) Dip 60.33° Field 48883 8 nT
Magnetic North is 7 97 degrees East of True North (at 12/23/2009)
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 72 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 72 = 97 72

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BOPCO, L.P.**
LEASE NO.:	**NM 47633**
WELL NAME & NO.:	**James Ranch Unit #12H**
SURFACE HOLE FOOTAGE:	**1451' FNL & 1821' FEL**
BOTTOM HOLE FOOTAGE	**330' FNL & 330' FEL Sec 17 - Lat #1**
BOTTOM HOLE FOOTAGE	**2630 FNL & 231' FWL Sec 27 – Lat #2**
LOCATION:	**Section 21, T. 22 S., R 30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

a. Setting Liner
b. BOPE tests

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. 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.

B. CASING

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

1. 13 3/8" surface casing is set at 534' and cemented to surface

2. 9 5/8" intermediate casing is set at 3726' and cemented to surface.

3. 7" production casing is set at 7262' and cemented to surface.

4a. Lateral 1: Cement not required on the **4-1/2"** casing. **Packer system being used.**

4b. Lateral 2: Cement not required on the **4-1/2"** casing. **Packer system being used.**

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling after cutting the window shall be **3000 (3M)** psi.

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

    a. The tests shall be done by an independent service company utilizing a test plug.

    b. The results of the test shall be reported to the appropriate BLM office.

    c. 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.**

    d. 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.

MAK 031510