

OCD-ARTESIA

ATS-10-418  
EA-573

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

R-III-POTASH

APPLICATION FOR PERMIT TO DRILL OR REENTER

WIPP

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

SHL: NM 02884 B  
BHL: LL 71988 B

1a. Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. 02884, 02887B&D, 071988B, 28881
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator BOPCO, L. P.		7. If Unit or CA Agreement, Name and No
3a. Address P. O. Box 2760 Midland, TX 79702		8. Lease Name and Well No James Ranch Unit #110H
3b. Phone No. (include area code) 432-683-2277		9. API Well No 30-OK-38115
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface NESE, UL I, 2235' FSL, 530' FEL, Lat N32.332922, Lon W103.827336 At proposed prod zone 660 FNL, 2310 FWL, Sec 8-R23S-R31E, Lat N32.324475, Lon W103.80093		10. Field and Pool, or Exploratory Quahada Ridge SE (Delaware)
11. Sec. T R M or Blk and Survey or Area Sec 1, T23S, R30E, Mer NMP		12. County or Parish Eddy County
13. State NM		14. Distance in miles and direction from nearest town or post office* 20 miles Northeast of Malaga, NM
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 530'	16. No. of acres in lease 7995.40	17. Spacing Unit dedicated to this well 400
18. Distance from proposed location* to nearest well, drilling completed, applied for, on this lease, ft 75'	19. Proposed Depth 17,348' MD, 7714' (TVD)	20. BLM/BIA Bond No. on file COB000050
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3294' GL	22. Approximate date work will start* 08/01/2010	23. Estimated duration 30 days

24. Attachments

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

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

25. Signature <i>Annette Childers</i>	Name (Printed/Typed) Annette Childers	Date 3-23-2010
Title Regulatory Clerk		

Approved by (Signature) <i>151 TONY J. HERRELL</i>	Name (Printed/Typed) 151 TONY J. HERRELL	Date 5-25-10
Title FOR STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon  
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

\*(Instructions on page 2)

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

KZ 8/20/10

Carlsbad Controlled Water Basin

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED



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

Form C-102  
Revised October 15, 2009

Submit one copy to appropriate  
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-015-38115</b>	Pool Code <del>50470</del> <b>50443</b>	Pool Name Quahada Ridge SE (Delaware)
Property Code 306407	Property Name JAMES RANCH UNIT	Well Number 110H
OGRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3294'

Surface Location

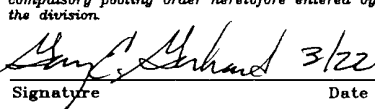
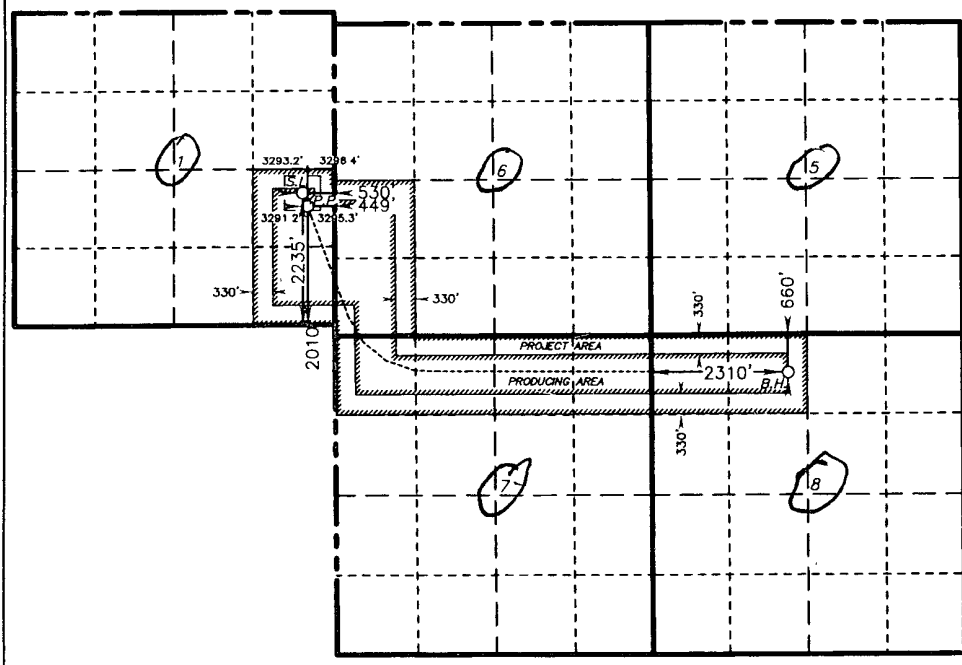
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	1	23 S	30 E		2235	SOUTH	530	EAST	EDDY

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	8	23 S	31 E		660	NORTH	2310	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
400	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

<p><b>SURFACE LOCATION</b> Lat - N 32°19'58.52" Long - W 103°49'38.41" NMSPCE- N 485218.026 E 697621.651 (NAD-83)</p>	<p><b>PROPOSED DELAWARE PENETRATION POINT</b> Lat - N 32°19'58.52" Long - W 103°49'38.41" NMSPCE- N 485218.026 E 697621.651 (NAD-83)</p>	<p><b>PROPOSED LOWER LBC "W" SAND PP</b> Lat - N 32°19'55.47" Long - W 103°49'37.13" NMSPCE- N 484910.20 E 697733.69 (NAD-83)</p>	<p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32°19'28.11" Long - W 103°48'03.35" NMSPCE- N 482184.90 E 705793.20 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b>  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.   Signature _____ Date 3/22/10 Gary E. Gerhard Printed Name</p>
 <p>SCALE = 1" = 3000'</p>				<p><b>SURVEYOR CERTIFICATION</b>  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.  FEBRUARY 10 2010 Date Surveyed Signature _____ Professional Surveyor 7977 Certificate No. Gary E. Jones 7977 BASIN SURVEYS</p>



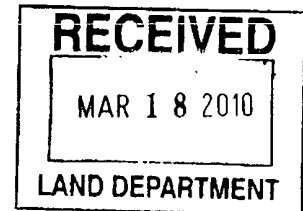


Mosaic Potash Carlsbad Inc.  
PO Box 71  
1361 Potash Mines Road  
Carlsbad, NM 88220  
www.mosakco.com

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

March 11, 2010

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



Re: JRU#121H, S17-23S-31E, 2450' FNL, 1500' FWL  
JRU#120H, S8-23S-31E, 290' FSL, 1990' FEL  
JRU#119H, S8-23S-31E, 1640' FSL, 1830' FEL  
JRU#115H, S5-23S-31E, 330' FNL, 120' FWL  
JRU#114H, S6-23S-31E, 270' FNL, 710' FEL  
JRU#111H, S8-23S-31E, 2000' FSL, 1750' FEL  
JRU#110H, S1-23S-30E, 2235' FSL, 530' FEL  
JRU#109H, S1-23S-30E, 2310' FSL, 530' FEL

Dear Mr. Glasscock:

Per our discussions this week concerning 8 wells referenced above, all of these locations are either "behind" previous drilling or adjacent to WIPP and will not affect expected mining plans. Contingent upon all of these wells being Delaware only wells (nothing deeper), Mosaic has no objection to these locations.

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



## OIL AND GAS LEASE

THIS AGREEMENT made this 8th day of July, 1981, between  
Sweetie J. Boyle, Individually and as Independent Executrix of the Estate of R. K.  
Boyle, Deceased  
 Lessor (whether one or more), whose address is: P.O. Box 10, Midland, Texas 79702  
 and Belco Petroleum Corporation, Lessee, WITNESSETH:

1. Lessor, in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration, receipt of which is hereby acknowledged, and of the covenants and agreements of Lessee hereinafter contained does hereby grant, lease and let unto Lessee the land covered hereby for the purposes and with the exclusive right of exploring, drilling, mining and operating for, producing and owning oil and gas, including casinghead gas, casinghead gasoline, condensate and all related hydrocarbons, and including all other products produced therefrom, hereinafter referred to collectively as "said minerals", together with the right to make surveys on said land, lay pipe lines, establish and utilize facilities for surface or subsurface disposal of said water, construct roads and bridges, canals, build tanks, power stations, telephone lines, employee houses and other structures on said land, necessary or useful in Lessee's operations in exploring, drilling for, producing, treating, storing and transporting said minerals produced from the land covered hereby or any other land adjacent thereto. The land covered hereby, herein called "said land", is located in the County of Eddy, State of New Mexico, and is described as follows:

NE/4 NE/4 Section 7, Township 23 South, Range 31 East, N.M.P.M.

(Notwithstanding the provisions in paragraph 3 herein, it is agreed that where the fraction 1/8th appears within said paragraph 3, that the same shall for the purposes of this lease be deemed to read 1/4th)

This lease also covers and includes any land contiguous to or adjoining the land above described, other than those constituting regular governmental subdivisions, and (a) unless otherwise stated by Lessee, the right of Lessee to operate, maintain, use, or otherwise dispose of any well or other structure on the land shall be deemed to contain 40 acres, whether actually containing more or less, and the above recital of acreage in any tract shall be deemed to be the true acreage thereof three (3) years effective from 8-29-81

2. Unless sooner terminated or longer kept in force under other provisions hereof, this lease shall remain in force for a term of ten (10) years from the date hereof, hereinafter called "primary term", and as long thereafter as operations, as hereinafter defined, are conducted upon said land with no cessation for more than ninety (90) consecutive days.

3. As royalty, Lessee covenants and agrees: (a) To deliver to the credit of Lessor in the pipe line to which Lessee may connect its wells, the equal one-eighth part of all oil produced and saved by Lessee from said land, or from time to time, at the option of Lessee, to pay Lessor the average posted market price of such one-eighth part of such oil at the well as of the day it is run to the pipe line or storage tanks, Lessor's interest. In either case, to bear one-eighth of the cost of freighting oil to market or to marketable pipe line oil; (b) To pay Lessor on gas and casinghead gas produced from said land (1) when sold by Lessee, one-eighth of the amount realized by Lessee, computed at the mouth of the well, or (2) when used by Lessee off said land or in the manufacture of gasoline or other products, the market value, at the mouth of the well, of one-eighth of such gas and casinghead gas; (c) To pay Lessor on all other oil and minerals produced and marketed or utilized by Lessee from said land, one-tenth either in kind or the market value thereof at the well, at Lessee's election. If, at the expiration of the primary term or at any time or times thereafter, there is any well on said land or on lands with which said land or any portion thereof has been pooled, capable of producing oil or gas, and all such wells are shut-in, this lease shall, nevertheless, continue in force as though operations were being conducted on said land for so long as said wells are shut-in, and thereafter this lease may be continued in force as if no shut-in had occurred. Lessee covenants and agrees to use reasonable diligence to produce, utilize, or market said minerals capable of being produced from said wells, but in the exercise of such diligence, Lessee shall not be obligated to install or furnish facilities other than well facilities and ordinary lease facilities of flow lines, separators, and lease tank, and shall not be required to settle labor trouble or to market gas upon terms unacceptable to Lessee. If, at any time or times after the expiration of the primary term, all such wells are shut-in for a period of ninety (90) consecutive days, and during such time there are no operations on said land, then at or before the expiration of said ninety-day period, Lessee shall pay or tender, by check or draft of Lessee, at royalty, a sum equal to the amount of annual delay rental provided for in this lease. Lessee shall make the payments or tenders at or before the end of each anniversary of the expiration of said ninety-day period if upon such anniversary this lease is being continued in force solely by reason of the provisions of this paragraph. Each such payment or tender shall be made to the parties who at the time of payment would be entitled to receive the royalties which would be paid under this lease if the wells were producing, and may be deposited in the depository bank provided for below. Nothing herein shall impair Lessor's right to release as provided in paragraph 5 hereof. In event of assignment of this lease in whole or in part, liability for payment hereunder shall rest exclusively on the then owner or owners of this lease, severally as to acreage owned by each.

4. Lessee is hereby granted the right, at its option, to pool or unitize any land covered by this lease with any other land covered by this lease and/or with any other land, lease, or leases, as to any or all of said minerals or horizons, to establish units containing not more than 80 surface acres, plus 10% acreage tolerance; provided, however, units may be established as to any one or more horizons or existing units may be enlarged as to any one or more horizons, so as to contain not more than 640 surface acres plus 10% acreage tolerance, if limited to one or more of the following: (1) gas, other than casinghead gas, (2) liquid hydrocarbons (condensates) which are not liquids in the subsurface reservoir, (3) minerals produced from wells classified as gas wells by the conservation agency having jurisdiction, if larger units than any of those herein permitted, either at the time established, or after enlargement, are required under any governmental rule or order, for the drilling or operation of a well at a regular location, or for obtaining maximum allowable from any well to be drilled, drilling, or already drilled, any such unit may be established or enlarged to conform to the size required by such governmental order or rule. Lessee shall exercise said option as to each desired unit by executing an instrument identifying such unit and filing it for record in the public office in which this lease is recorded. Each of said options may be exercised by Lessee at any time and from time to time while this lease is in force, and whether before or after production has been established either on said land, or on the portion of said land included in the unit, or on other land unitized therewith. A unit established hereunder shall be valid and effective for all purposes of this lease even though there may be mineral, royalty, or leasehold interests in lands within the unit which are not effectively pooled or unitized. Any operations conducted on any part of such unitized land shall be considered for all purposes, except the payment of royalty, operations conducted upon said land under this lease. There shall be allocated to the land covered by this lease within each such unit that proportion of the total production of unitized minerals from the unit, after deducting any used or lease or unit operations, which the number of surface acres in such land covered by this lease within the unit bears to the total number of surface acres in the unit, and the production so allocated shall be considered for all purposes, including payment or delivery of royalty, overriding royalty and any other payments out of production, to be the entire production of unitized minerals from the land to which allocated in the same manner as though produced therefrom under the terms of this lease. The owner of the reversionary estate of any term royalty or mineral estate agrees that the accrual of royalties pursuant to this paragraph or of shut-in royalties from a well on the unit shall satisfy any limitation of term requiring production of oil or gas. The formation of any unit hereunder shall not have the effect of exchanging or transferring any interest under this lease between parties. Neither shall it impair the right of Lessee to release as provided in paragraph 5 hereof, except that Lessee may not so release as to lands within a unit while there are operations thereon for unitized minerals unless all pooled leases are released as to lands within the unit. At any time while this lease is in force Lessee may divide any unit established hereunder by filing for record in the public office where this lease is recorded a declaration to that effect. If at that time no operations are being conducted thereon for unitized minerals, Subject to the provisions of this paragraph 4, a unit once established hereunder shall remain in force so long as any lease subject thereto shall remain in force. If this lease now or hereafter covers separate tracts, no pooling or unitization of royalty interests as between any such separate tracts is intended or shall be implied or result merely from the inclusion of such separate tracts within this lease but Lessee shall nevertheless have the right to pool or unitize as provided in this paragraph 4 with consequent allocation of production as herein provided. As used in this paragraph 4, the words "separate tract" mean any tract with royalty owner ship differing, now or hereafter, either as to parties or amounts, from that as to any other part of the leased premises.

5. If operations are not conducted on said land on or before the first anniversary date hereof, this lease shall terminate as to both parties, unless Lessee on or before said date shall, subject to the further provisions hereof, pay or tender to Lessor or to Lessor's credit to the

Midland National Bank at

Midland, Texas 79701

or its successors,

which shall continue as the depository, regardless of changes in ownership of delay rental, royalties, or other moneys, the sum of \$40.00 which shall operate as delay rental and cover the privilege of deferring operations for one year from said date. In like manner and upon like payments or tenders, operations may be further deferred for like periods of one year each during the primary term. If at any time that Lessee pays or tenders delay rental, royalties, or other moneys, two or more parties are, or claim to be, entitled to receive same, Lessee may, in lieu of any other method of payment herein provided, pay or tender such rental, royalties, or other moneys, in the manner herein specified, either jointly to such parties or separately to each in accordance with their respective ownerships thereof, as Lessee may elect. Any payment hereunder may be made by check or draft of Lessee deposited in the mail or delivered to Lessor or to the depository bank on or before the last date for payment. Said delay rental shall be apportionable as to said land on an acreage basis, and a failure to make proper payment or tender of delay rental as to any portion of said land or as to any interest therein shall not affect this lease as to any portion of said land or as to any interest therein as to which proper payment or tender is made. Any payment or tender which is made in an attempt to make proper payment, but which is erroneous in whole or in part as to parties, amounts, or depository, shall nevertheless be sufficient to prevent termination of this lease and to extend the time within which operations may be conducted in the same manner as though a proper payment had been made; provided, however, Lessee shall correct such error within thirty (30) days after Lessee has received written notice thereof from Lessor. If the depository bank should refuse to accept any rental tendered hereunder, the tender nevertheless shall be fully effective and Lessee shall have no obligation to make any further tender or payment in connection therewith until after Lessee shall have furnished Lessee with an instrument satisfactory to Lessee naming another bank as agent to receive such payment. Lessee may at any time and from time to time execute and deliver to Lessor or file for record a release or releases of this lease as to any part or all of said land or of any mineral or horizon thereunder, and thereby be relieved of all obligations as to the released acreage or interest. If this lease is so released as to all of said minerals and horizons under a portion of said land, the delay rental and other payments computed in accordance therewith shall thereupon be reduced in the proportion that the acreage released bears to the acreage which was covered by this lease immediately prior to such release.

74-1-K03

28881-A



6. If at any time or times during the primary term operations are conducted on said land and if all operations are discontinued, this lease shall terminate on its anniversary date next following the nineteenth (19th) day after such discontinuance unless on or before such anniversary date Lessee either (1) conducts operations or (2) commences or resumes the payment or tender of delay rental; provided, however, if such anniversary date is at the end of the primary term, or if there is no further anniversary date of the primary term, this lease shall terminate at the end of such term or on the nineteenth (19th) day after discontinuance of all operations, whichever is the later date, unless on such later date either (1) Lessee is conducting operations or (2) the shut-in well provisions of paragraph 3 or the provisions of paragraph 11 are applicable. Whenever used in this lease the word "operations" shall mean operations for and any of the following: drilling, testing, completing, reworking, recompleting, deepening, plugging back or repairing of a well in search for or in an endeavor to obtain production of oil, gas or other said minerals, or the production of oil, gas or other said minerals, whether or not in paying quantities.

7. Lessee shall have the use, free from royalty, of water, other than from lessor's water wells, and of oil and gas produced from said land in all operations hereunder. Lessee shall have the right at any time to remove all machinery and fixtures placed on said land, including the right to draw and remove casing. No well shall be drilled deeper than 200 feet in the hole or down now on said land without the consent of the lessor. Lessee shall pay for damages caused by its operations to growing crops and timber on said land.

8. The rights and estate of any party hereto may be assigned from time to time in whole or in part and as to any of said minerals or horizons. All of the covenants, obligations, and considerations of this lease shall extend to and be binding upon the parties hereto, their heirs, successors, assigns and assigns. No change or division in the ownership of said land, royalty, delay rental, or other moneys, or any part thereof, howsoever effected, shall increase the obligations or diminish the rights of Lessee, including, but not limited to, the location and drilling of wells and the measurement of production. Notwithstanding any other actual or constructive knowledge or notice thereof of or to Lessee, its successors or assigns, no change or division in the ownership of said land or of the royalties, delay rental, or other moneys, or the right to receive the same, howsoever effected, shall be binding upon the then record owner of this lease until thirty (30) days after there has been furnished to such record owner at his or its principal place of business by lessor or lessor's heirs, successors, or assigns, notice of such change or division, supported by either original or duly certified copies of the instruments which have been properly filed for record and which evidence such change or division, and of such court records and proceedings, transcripts, or other documents as shall be necessary in the opinion of such record owner to establish the validity of such change or division. If any such change in ownership occurs by reason of the death of the owner, Lessee may, nevertheless pay or tender such royalties, delay rental, or other moneys, or part thereof, to the credit of the decedent in the depository bank provided for above. In the event of assignment of this lease as to any part (whether divided or undivided) of said land, the delay rental payable hereunder shall be apportionable as between the several lessor owners, ratably according to the surface area or undivided interests of each, and default in delay rental payment by one shall not affect the right of other lessor owners hereunder.

9. In the event Lessor considers that Lessee has not complied with all its obligations hereunder, both express and implied, Lessee shall notify Lessee in writing, setting out specifically in what respect Lessee has breached this contract. Lessee shall then have sixty (60) days after receipt of said notice within which to meet or commence to meet all or any part of the breaches alleged by Lessor. The service of said notice shall be precedent to the bringing of any action by Lessor on said lease for any cause, and no such action shall be brought until the lapse of sixty (60) days after service of such notice on Lessee. Neither the service of said notice nor the doing of any act by Lessee aimed to meet all or any of the alleged breaches shall be deemed an admission or acceptance of the fact that Lessee has failed to perform all its obligations hereunder. If this lease is cancelled for any cause, it shall nevertheless remain in force and effect as to (1) sufficient acreage around each well as to which there are operations to constitute a drilling or maximum allowable unit under applicable governmental regulations (but in no event less than forty acres), such acreage to be designated by Lessee as nearly as practicable in the form of a square centered at the well, or in such shape as then existing survey rules require, and (2) any part of said land included in a pooled unit on which there are operations. Lessee shall also have such easements on said land as are necessary to operations on the acreage so retained.

10. Lessor hereby warrants and agrees to defend title to said land against the claims of all persons whomsoever. Lessor's rights and interests hereunder shall be charged primarily with any mortgages, liens or other liens, or interests and other charges on said land, but Lessor agrees that Lessee shall have the right at any time to pay or tender same for Lessor, either before or after maturity, and be subrogated to the rights of the holder thereof and to deduct amounts so paid from royalties or other payments payable or which may become payable to Lessor and/or assigns under this lease. If this lease covers a less interest in said minerals, or any of them, in all or any part of said land than the entire and undivided fee simple estate (whether Lessor's interest is herein specified or not), or no interest therein, then the royalties, delay rental, and other moneys accruing from any part as to which this lease covers less than such full interest, shall be paid only in the proportion which the interest therein, if any, covered by this lease, bears to the whole and undivided fee simple estate therein. All royalty interest covered by this lease (whether or not owned by Lessor) shall be paid out of the royalty herein provided. This lease shall be binding upon each party who executes it without regard to whether it is executed by all those named herein as lessor.

11. If, while this lease is in force, at or after the expiration of the primary term hereof, it is not being continued in force by reason of the shut-in well provisions of paragraph 3 hereof, and Lessee is not conducting operations on said land by reason of (1) any law, order, rule or regulation, (whether or not subsequently determined to be invalid) or (2) any other cause, whether similar or dissimilar, (except financial) beyond the reasonable control of Lessee, the primary term and the delay rental provisions hereof shall be extended until the first anniversary date hereof occurring ninety (90) or more days following the removal of such delaying cause, and this lease may be extended thereafter by operations as if such delay had not occurred.

12. Lessor hereby expressly relinquishes power and releases and waives all rights under and by virtue of the homestead exemption laws insofar as they may in any way affect the purpose for which this lease is made.

IN WITNESS WHEREOF, this instrument is executed on the date first above written.

Sweetie J. Boyle  
Sweetie J. Boyle, Indv. and as Ind.  
Executrix of the Estate of R. E. Boyle, Dec.  
Social Security or I.D. Number:

451-09-7394  
Social Security or I.D. Number:

Social Security or I.D. Number:

Social Security or I.D. Number:

Social Security or I.D. Number:

Social Security or I.D. Number:

Social Security or I.D. Number:

Social Security or I.D. Number:

STATE OF Texas

INDIVIDUAL ACKNOWLEDGMENT

COUNTY OF Midland

SS.

I, the undersigned, a Notary Public in and for said County and State, do hereby certify that Sweetie J. Boyle, Indv. and as Ind. personally known, and known to me to be the same person described in and who executed the foregoing instrument, appeared before me this day in person and acknowledged to me that she executed and delivered the same as her free and voluntary act and deed, for the uses, purposes and considerations therein expressed, including the relinquishment of dower and homestead. Given under my hand and official seal this 17th day of July, 1981.

My Commission Expires: 12-17-84

Quinn Fox Shaw  
Notary Public in and for said County and State, residing at  
P. O. Box 7907, Midland 79703

STATE OF \_\_\_\_\_

INDIVIDUAL ACKNOWLEDGMENT

COUNTY OF \_\_\_\_\_

SS.

I, the undersigned, a Notary Public in and for said County and State, do hereby certify that \_\_\_\_\_, to me personally known, and known to me to be the same person described in and who executed the foregoing instrument, appeared before me this day in person and acknowledged to me that \_\_\_\_\_ executed and delivered the same as \_\_\_\_\_ free and voluntary act and deed, for the uses, purposes and considerations therein expressed, including the relinquishment of dower and homestead. Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

My Commission Expires:

Notary Public in and for said County and State, residing at \_\_\_\_\_

WHEN RECORDED RETURN TO:

This instrument was filed for record on the 17th day of September, 1981, at 12:30 o'clock P.M., and duly recorded in Book 204, Page 192 of the Public records of this office. County Clerk \_\_\_\_\_  
County of Midland, State of Texas  
Jamie Pittman, Deputy

IMPRESS

INDEXED

1981



Surface casing to be set into the Rustler below all fresh water sands.

7" casing will be set at approximately 11,500' MD (thru curve and turn) and cemented in two stages with DV tool set at approximately 5000'. Cement will be circulated to surface.

Production casing will be 4-1/2" run with Baker hydraulic set packers. Top of 4-1/2" liner will be approximately 200' into 7" at approximately 11,300' MD.

Drilling procedure, BOP diagram, and anticipated tops attached

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

The surface and the bottom hole locations are on Federal land. Both are orthodox.

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



# EIGHT POINT DRILLING PROGRAM BOPCO, L.P.

**NAME OF WELL: James Ranch Unit #110H**

LEGAL DESCRIPTION - SURFACE: 2235' FSL, 530' FEL, Section 1, T23S, R30E, Eddy County, NM.

BHL: 660' FNL, 2310' FWL, Section 8, T23S, R31E, Eddy County, New Mexico.

## POINT 1: ESTIMATED FORMATION TOPS

(See No. 2 Below)

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

Anticipated Formation Tops: KB 3313' (estimated)

GL 3294'

FORMATION	ESTIMATED TOP FROM KB		ESTIMATED SUB-SEA TOP	BEARING
	TVD	MD		
T/Rustler	208'	208'	+ 3105'	Barren
T/Salt	661'	661'	+ 2652'	Barren
B/Salt	3661'	3661'	- 348'	Barren
T/Lamar Lime	3887'	3897'	- 584'	Barren
T/Ramsey	3945'	3945'	- 632'	Oil/Gas
T/Lower Cherry Canyon	6069'	6069'	- 2756'	Oil/Gas
KOP (Kick Off Point)	7043'	7043'	- 3730'	N/A
T/Brushy Canyon "U" Sand	7209'	7214'	- 3896'	Oil/Gas
Lwr Brushy Canyon "8A"	7411'	7495'	- 4098'	Oil/Gas
Lwr Brushy Canyon "W" Sand	7495'	7343'	- 4182'	Oil/Gas
EOC Target	7520'	7793'	- 4206'	Oil/Gas
TD (end of lateral)	7714'	17,348'	- 4400'	Oil/Gas

## POINT 3: CASING PROGRAM

See COA

TYPE	INTERVALS (MD)	Hole Size	PURPOSE	CONDITION
20"	0' - 40'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, 8rd, ST&C	0' - 651'	17-1/2"	Surface	New
9-5/8", 40#, J-55, 8rd, LT&C	0' - 3947'	12-1/4"	Intermediate	New
7", 26#, N-80, 8rd, LT&C	0' - 11,522'	8-3/4"	Production	New
4-1/2", 11.6#, N-80, 8rd, LT&C	11,522' - 17,348'	6-1/8"	Production	New

## CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8rd, ST&C	12.80	2.48	5.12
9-5/8", 40#, J-55, 8rd, LT&C	3.95	1.23	1.82
7", 26#, N-80, 8rd, LT&C	3.16	1.56	1.77
4-1/2", 11.6#, N-80, 8rd, LT&C	3.06	1.84	1.91



## 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 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 (0.52 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* 2<sup>ND</sup> INTERMEDIATE CASING - (7")

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 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.

### *Liner* PRODUCTION CASING - (4-1/2")

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg)
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient (0.433 psi/ft). Backup on production strings will be formation pore pressure (0.433 psi/ft). The effects of tension on burst will not be utilized.



#### POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

The blowout preventer equipment will be as shown in Diagram #2 and will consist of a double ram type preventer (5000 psi WP) and a bag type (Hydril) annular preventer (5000 psi WP). The same BOPE will be installed on the surface casinghead and on all subsequent casing strings. The BOP stack, chokes, kill lines, upper and lower kelly cocks, inside BOP, choke manifold when installed on the surface casinghead will be hydro-tested to 200 psig & 2000 psig by a independent tester. The BOP stack, chokes, kill lines, upper and lower kelly cocks, inside BOP, choke manifold, when rigged up on the intermediate casing spool will be tested to 3000 psig by independent tester. (hydril to 2500 psig) In addition to the high pressure test, a low pressure (250 psig) test will be required.

These tests will be performed:

- Upon installation
- After any component changes
- Fifteen days after a previous test
- As required by well conditions

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

#### POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - <del>654'</del> <sup>475'</sup>	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0
<del>654'</del> <sup>475'</sup> - <del>3047'</del> <sup>11,522'</sup>	Brine Water	9.8 - 10.2	28-30	NC	NC	NC	9.5 - 10.5
<del>3047'</del> <sup>11,522'</sup> - 11,522'	FW/Gel	8.7 - 9.0	28-36	NC	NC	NC	9.5 - 10.0
<del>11,522'</del> <sup>11,522'</sup> - 17,348'	FW/Gel/Starch	8.7 - 9.0	28-36	NC	NC	<20	9.5 - 10.0

**NOTE:** May increase vis for logging purposes only.

#### 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 with GR, PE, Density Neutron, Receptivity in lateral leg open hole.

Run #3: GR/CNL by Production Engineer from base of 9-5/8" casing to surface.

##### C) CONVENTIONAL CORING

None anticipated

See COA



## D) CEMENT

<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FT OF FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
<b>SURFACE:</b>						
Lead 0 - 351' (100% excess Circ to surface)	300	351	Class "C" + 4% Extender + 2% CaCl <sub>2</sub>	9 15	13.50	1 74
Tail 351' - <del>651</del> <sup>475</sup> (100% excess)	330	300	Class "C" + 2% CaCl <sub>2</sub>	6 35	14 80	1 34
<b>INTERMEDIATE:</b>						
Lead 0' - 3417' (100% excess Circ to surface)	1050	3417	35/65 Poz + 5% NaCl + 0.20% Anti Foam + 6% Extender + 0.125 pps Lost circulation material	11 44	12.60	2.08
Tail 3417' - <del>3917</del> <sup>4200</sup> (100% excess)	300	500	Class "C"	6.36	14 80	1 33
<b>2<sup>nd</sup> INTERMEDIATE:</b>						
Stage 1.						
Lead 5000' - 11,522' (50% excess)	700	6522	LiteCrete + 3 pps Extender + 0.20% Anti Foam + 0.30% Retarder + 0.30% Dispersant	7 48	10.20	2 18
DV Tool @ 5,000'						
Stage 2.						
Lead 0' - 4900' (100% excess Circ to surface)	775	4900	35/65 Poz + 5% NaCl + 0.60% Extender + 0.20% Anti Foam	10 92	12 60	1 98
Tail 4900' - 5000' (50% excess)	50	100	Class "C" + 0.20% Retarder	6.35	14 80	1 33

## E) DIRECTIONAL DRILLING

BOPCO, L.P. plans to drill out the 9-5/8" intermediate casing with an 8-3/4" bit to a TVD of approximately 7043'. At this depth an 8-3/4" directional hole will be initiated at an azimuth of 160°, building angle at 12.00°/100' to a max of 90° at a TVD of 7520' (MD 7792'). This 8-3/4" hole will be continued on this 160° azimuth to a depth of 9525' where the azimuth will be turned at 4°/100' to an azimuth of 90° at a measured depth of 11,222'. This azimuth will be continued for another 250'. 8-3/4" hole will be TD'd at 11,522' MD (7547' TVD). At this depth 7" casing will be installed with DV Tool at approximately 5000'. The 7" casing will be cemented in two stages with cement circulated to the surface. A 6-1/8" open hole will be drilled out from this 7" casing and thru the lateral to a MD of 17,340' (TVD 7714'). 4-1/2" casing will be installed in the lateral using Baker Hydraulic packers to isolated pay intervals in the "W" Sand.



**POINT 7: ANTICIPATED RESERVOIR CONDITIONS**

Normal pressures are anticipated throughout Delaware section. A BHP of 3581 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 4070'-7807' TVD. No H<sub>2</sub>S is anticipated.

**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**

Anticipated spud date 8/1/2010

30 days drilling operations

14 days completion operations

  
\_\_\_\_\_  
Gary Gerhard

GEG/mac  
March 17, 2010





# BOPCO, L.P.

Location Eddy County, NM  
Field JRU Project  
Facility JRU No. 110H

Slot No 110H SHL  
Well No. 110H  
Wellbore No 110H PBHL

Plot reference wellpath is Prtwin\_3

True vertical depths are referenced to Rig on No. 110H SHL (RT)

Measured depths are referenced to Rig on No. 110H SHL (RT)

Rig on No. 110H SHL (RT) to Mean Sea Level 3213 feet

Mean Sea Level to Mud line (Facility JRU No. 110H) 3294 feet

Coordinates are in feet referenced to Surface Location

Grid System: NAD83 / TM New Mexico State Planes Eastern Zone (3001) US feet

North Reference: Grid north

Scale: True distance

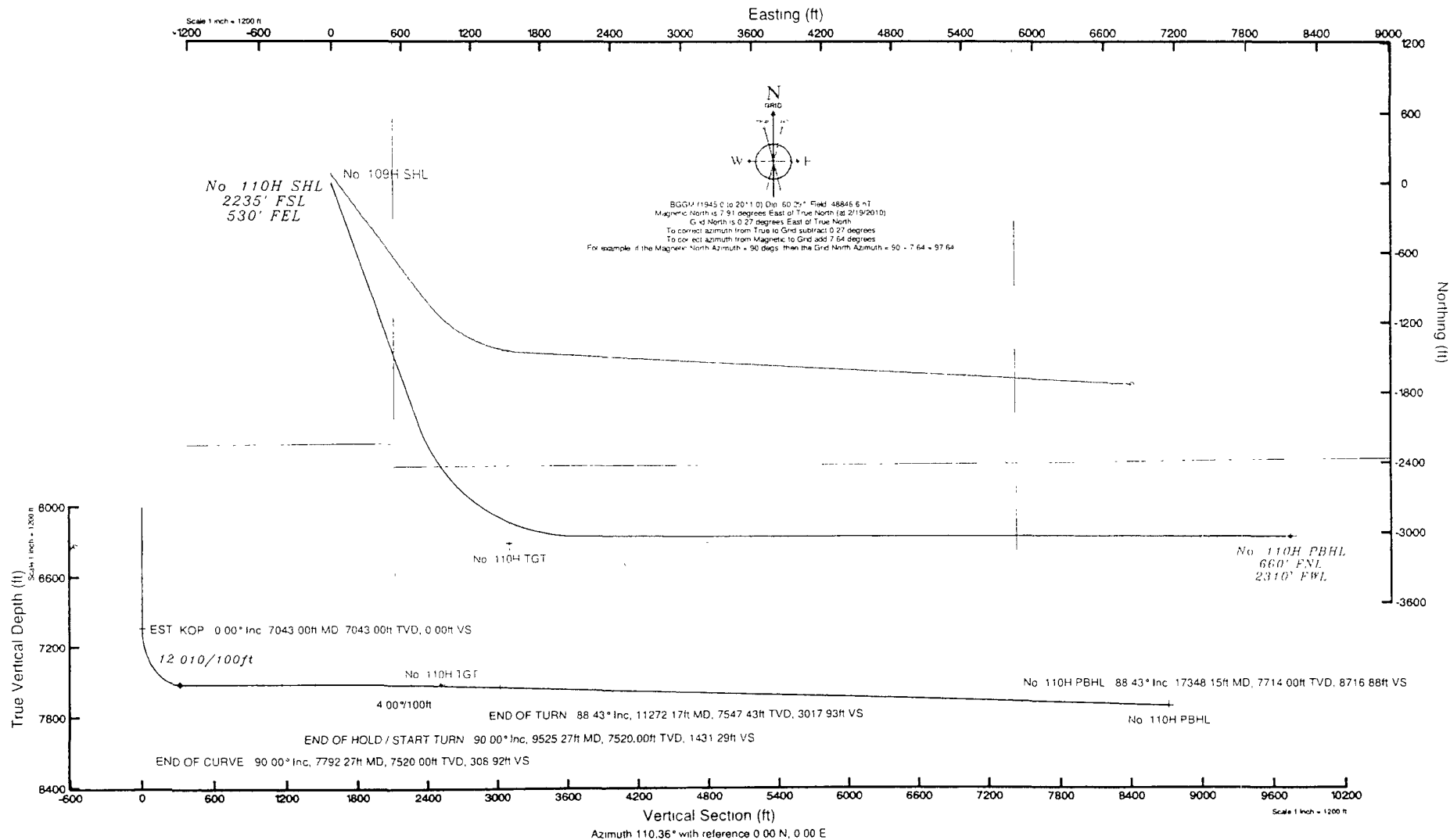
Depths are in feet

Created by: Victor Hernandez on 2/25/2010

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	0 00	0 000	160 000	0 00	0 00	0 00	0 00	0 00
EST KOP	7043 00	0 000	160 000	7043 00	0 00	0 00	0 00	0 00
END OF CURVE	7792 27	90 000	160 000	7520 00	-348 23	163 14	12 01	308 92
END OF HOLD / START TURN	9525 27	90 000	160 000	7520 00	-2076 72	755 86	0 00	1431 29
END OF TURN	11272 17	88 429	90 132	7547 43	-3019 34	2098 40	4 00	3017 93
No 110H PBHL	17348 15	88 429	90 132	7714 00	-3033 32	8172 08	0 00	8716 88







# Planned Wellpath Report

Prelim\_3  
Page 1 of 6



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 110H SHL
Area	Eddy County, NM	Well	No. 110H
Field	JRU Project	Wellbore	No. 110H PBHL
Facility	JRU No. 110H		

## REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999937	Report Generated	2/25/2010 at 2:50:52 PM
Convergence at slot	0.27° East	Database/Source file	WA_Midland/No. 110H_PBHL.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	697621.65	485218.03	32°19'58.517"N	103°49'38.415"W
Facility Reference Pt			697621.65	485218.03	32°19'58.517"N	103°49'38.415"W
Field Reference Pt			608863.40	469031.40	32°17'21.308"N	104°06'53.319"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 110H SHL (RT) to GL	19.00ft
Horizontal Reference Pt	Surface Location	Rig on No. 110H SHL (RT) to Mean Sea Level	3313.00ft
Vertical Reference Pt	Rig on No. 110H SHL (RT)	GL to Mud Line (Facility)	0.00ft
North Reference Pt	Rig on No. 110H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	110.36°





# Planned Wellpath Report

Prelim\_3

Page 2 of 6



INTEQ

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Facility	JRU No. 110H		

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

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0 00	0 000	160 000	0 00	0 00	0 00	0 00	697621 65	485218 03	32°19'58 517"N	103°49'38 415"W	0 00	Tie On
7043 00	0 000	160 000	7043 00	0 00	0 00	0 00	697621 65	485218 03	32°19'58 517"N	103°49'38 415"W	0 00	EST_KOP
7143 00†	12.012	160 000	7142 27	6 76	-9 81	3 57	697625 22	485208 21	32°19'58 420"N	103°49'38 374"W	12 01	
7213 61†	20.494	160 000	7210 00	19 55	-28 37	10 33	697631 98	485189 66	32°19'58 236"N	103°49'38 296"W	12 01	Brushy Canyon U
7243 00†	24.023	160 000	7237 19	26 76	-38 83	14 13	697635 78	485179 20	32°19'58 133"N	103°49'38 252"W	12 01	
7343 00†	36 035	160 000	7323 61	59 11	-85 77	31 22	697652 87	485132 27	32°19'57 667"N	103°49'38 056"W	12 01	
7443 00†	48.047	160 000	7397 74	102 40	-148 58	54 08	697675 73	485069 46	32°19'57 045"N	103°49'37 793"W	12 01	
7464 90†	50 677	160 000	7412 00	113 16	-164 19	59 76	697681 41	485053 85	32°19'56 890"N	103°49'37 727"W	12 01	Ln Brushy Canyon 8A
7543 00†	60 058	160 000	7456 34	154 74	-224 51	81 72	697703 36	484993 53	32°19'56 292"N	103°49'37 475"W	12 01	
7640 31†	71 748	160 000	7496 00	212 17	-307 84	112 05	697733 69	484910 20	32°19'55 466"N	103°49'37 126"W	12 01	LBC W Sand
7643 00†	72 070	160 000	7496 83	213 82	-310 24	112 92	697734 56	484907 80	32°19'55 442"N	103°49'37 116"W	12 01	
7743 00†	84 082	160 000	7517 46	277 07	-402 02	146 32	697767 96	484816 03	32°19'54 533"N	103°49'36 732"W	12 01	
7792 27	90 000	160 000	7520 00	308 92	-448 23	163 14	697784 78	484769 82	32°19'54 075"N	103°49'36 538"W	12 01	END OF CURVE
7843 00†	90 000	160 000	7520 00	341 78	-495 90	180 49	697802 13	484722 15	32°19'53 602"N	103°49'36 339"W	0 00	
7943 00†	90 000	160 000	7520 00	406 54	-589 87	214 70	697836 33	484628 19	32°19'52 671"N	103°49'35 945"W	0 00	
8043 00†	90 000	160 000	7520 00	471 31	-683 84	248 90	697870 53	484534 23	32°19'51 739"N	103°49'35 552"W	0 00	
8143 00†	90 000	160 000	7520 00	536 07	-777 81	283 10	697904 73	484440 26	32°19'50 808"N	103°49'35 158"W	0 00	
8243 00†	90 000	160 000	7520 00	600 84	-871 78	317 30	697938 93	484346 30	32°19'49 876"N	103°49'34 765"W	0 00	
43 00†	90 000	160 000	7520 00	665 60	-965 75	351 50	697973 13	484252 34	32°19'48 945"N	103°49'34 372"W	0 00	
8443 00†	90 000	160 000	7520 00	730 36	-1059 72	385 71	698007 33	484158 38	32°19'48 014"N	103°49'33 978"W	0 00	
8543 00†	90 000	160 000	7520 00	795 13	-1153 69	419 91	698041 53	484064 41	32°19'47 082"N	103°49'33 585"W	0 00	
8643 00†	90 000	160 000	7520 00	859 89	-1247 66	454 11	698075 73	483970 45	32°19'46 151"N	103°49'33 191"W	0 00	
8743 00†	90 000	160 000	7520 00	924 66	-1341 63	488 31	698109 93	483876 49	32°19'45 219"N	103°49'32 798"W	0 00	
8843 00†	90 000	160 000	7520 00	989 42	-1435 60	522 51	698144 13	483782 52	32°19'44 288"N	103°49'32 405"W	0 00	
8943 00†	90 000	160 000	7520 00	1054 18	-1529 57	556 72	698178 33	483688 56	32°19'43 356"N	103°49'32 011"W	0 00	
9043 00†	90 000	160 000	7520 00	1118 95	-1623 54	590 92	698212 53	483594 60	32°19'42 425"N	103°49'31 618"W	0 00	
9143 00†	90 000	160 000	7520 00	1183 71	-1717 50	625 12	698246 73	483500 63	32°19'41 494"N	103°49'31 224"W	0 00	
9243 00†	90 000	160 000	7520 00	1248 48	-1811 47	659 32	698280 93	483406 67	32°19'40 562"N	103°49'30 831"W	0 00	
9343 00†	90 000	160 000	7520 00	1313 24	-1905 44	693 52	698315 13	483312 71	32°19'39 631"N	103°49'30 438"W	0 00	
9443 00†	90 000	160 000	7520 00	1378 01	-1999 41	727 73	698349 33	483218 74	32°19'38 699"N	103°49'30 044"W	0 00	





# Planned Wellpath Report

Prelim\_3

Page 3 of 6



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 110H SHL
Area	Eddy County, NM	Well	No. 110H
Field	JRU Project	Wellbore	No. 110H PBHL
Facility	JRU No. 110H		

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

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
525.27	90.000	160.000	7520.00	1431.29	-2076.72	755.86	698377.47	483141.44	32°19'37.933"N	103°49'29.721"W	0.00	END OF HOLD / START TURN
9543.00†	89.979	159.291	7520.00	1442.85	-2093.34	762.03	698383.63	483124.82	32°19'37.768"N	103°49'29.650"W	4.00	
9643.00†	89.863	155.293	7520.14	1511.13	-2185.57	800.63	698422.23	483032.59	32°19'36.854"N	103°49'29.205"W	4.00	
9743.00†	89.747	151.294	7520.48	1584.33	-2274.89	845.56	698467.16	482943.29	32°19'35.968"N	103°49'28.686"W	4.00	
9843.00†	89.632	147.296	7521.02	1662.11	-2360.85	896.61	698518.20	482857.33	32°19'35.115"N	103°49'28.096"W	4.00	
9943.00†	89.519	143.298	7521.77	1744.07	-2443.04	953.53	698575.12	482775.14	32°19'34.299"N	103°49'27.437"W	4.00	
10043.00†	89.408	139.299	7522.70	1829.83	-2521.06	1016.04	698637.63	482697.13	32°19'33.524"N	103°49'26.713"W	4.00	
10143.00†	89.301	135.300	7523.83	1918.95	-2594.53	1083.84	698705.42	482623.66	32°19'32.794"N	103°49'25.927"W	4.00	
10243.00†	89.196	131.301	7525.14	2011.02	-2663.10	1156.59	698778.17	482555.10	32°19'32.112"N	103°49'25.083"W	4.00	
10343.00†	89.096	127.302	7526.63	2105.58	-2726.42	1233.95	698855.52	482491.79	32°19'31.482"N	103°49'24.185"W	4.00	
10443.00†	89.000	123.303	7528.29	2202.17	-2784.19	1315.54	698937.10	482434.02	32°19'30.907"N	103°49'23.238"W	4.00	
10543.00†	88.909	119.303	7530.12	2300.31	-2836.12	1400.95	699022.51	482382.09	32°19'30.389"N	103°49'22.245"W	4.00	
10643.00†	88.823	115.303	7532.10	2399.54	-2881.97	1489.77	699111.33	482336.24	32°19'29.931"N	103°49'21.213"W	4.00	
10743.00†	88.743	111.303	7534.22	2499.37	-2921.52	1581.58	699203.12	482296.70	32°19'29.535"N	103°49'20.145"W	4.00	
10843.00†	88.669	107.303	7536.48	2599.30	-2954.56	1675.91	699297.45	482263.66	32°19'29.204"N	103°49'19.047"W	4.00	
10943.00†	88.602	103.302	7538.87	2698.86	-2980.94	1772.32	699393.85	482237.28	32°19'28.938"N	103°49'17.925"W	4.00	
11043.00†	88.541	99.301	7541.36	2797.57	-3000.52	1870.33	699491.86	482217.70	32°19'28.740"N	103°49'16.784"W	4.00	
11143.00†	88.487	95.300	7543.95	2894.92	-3013.22	1969.46	699590.99	482205.00	32°19'28.609"N	103°49'15.630"W	4.00	
11243.00†	88.441	91.299	7546.64	2990.47	-3018.98	2069.24	699690.76	482199.25	32°19'28.548"N	103°49'14.467"W	4.00	
11272.17	88.429	90.132	7547.43	3017.93	-3019.34	2098.40	699719.91	482198.88	32°19'28.543"N	103°49'14.128"W	4.00	END OF TURN
11343.00†	88.429	90.132	7549.37	3084.36	-3019.50	2169.20	699790.71	482198.72	32°19'28.538"N	103°49'13.302"W	0.00	
11443.00†	88.429	90.132	7552.12	3178.16	-3019.73	2269.16	699890.67	482198.49	32°19'28.531"N	103°49'12.138"W	0.00	
11543.00†	88.429	90.132	7554.86	3271.95	-3019.96	2369.13	699990.62	482198.26	32°19'28.524"N	103°49'10.973"W	0.00	
11643.00†	88.429	90.132	7557.60	3365.75	-3020.19	2469.09	700090.58	482198.03	32°19'28.517"N	103°49'09.808"W	0.00	
11743.00†	88.429	90.132	7560.34	3459.54	-3020.42	2569.05	700190.53	482197.80	32°19'28.510"N	103°49'08.643"W	0.00	
11843.00†	88.429	90.132	7563.08	3553.34	-3020.65	2669.01	700290.49	482197.57	32°19'28.503"N	103°49'07.478"W	0.00	
11943.00†	88.429	90.132	7565.82	3647.13	-3020.88	2768.97	700390.45	482197.34	32°19'28.496"N	103°49'06.313"W	0.00	
12043.00†	88.429	90.132	7568.56	3740.93	-3021.11	2868.94	700490.40	482197.11	32°19'28.489"N	103°49'05.148"W	0.00	
12143.00†	88.429	90.132	7571.31	3834.72	-3021.34	2968.90	700590.36	482196.88	32°19'28.482"N	103°49'03.983"W	0.00	
12243.00†	88.429	90.132	7574.05	3928.52	-3021.58	3068.86	700690.31	482196.65	32°19'28.475"N	103°49'02.819"W	0.00	





# Planned Wellpath Report

Prelim\_3

Page 4 of 6



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 110H SHL
Area	Eddy County, NM	Well	No. 110H
Field	JRU Project	Wellbore	No. 110H PBHL
Facility	JRU No. 110H		

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

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2343 00†	88.429	90.132	7576.79	4022.31	-3021.81	3168.82	700790.27	482196.42	32°19'28.467"N	103°49'01.654"W	0.00	
12443 00†	88.429	90.132	7579.53	4116.11	-3022.04	3268.79	700890.22	482196.19	32°19'28.460"N	103°49'00.489"W	0.00	
12543 00†	88.429	90.132	7582.27	4209.90	-3022.27	3368.75	700990.18	482195.96	32°19'28.453"N	103°48'59.324"W	0.00	
12643 00†	88.429	90.132	7585.01	4303.70	-3022.50	3468.71	701090.14	482195.73	32°19'28.446"N	103°48'58.159"W	0.00	
12743 00†	88.429	90.132	7587.75	4397.49	-3022.73	3568.67	701190.09	482195.50	32°19'28.439"N	103°48'56.994"W	0.00	
12843 00†	88.429	90.132	7590.50	4491.28	-3022.96	3668.63	701290.05	482195.27	32°19'28.432"N	103°48'55.829"W	0.00	
12943 00†	88.429	90.132	7593.24	4585.08	-3023.19	3768.60	701390.00	482195.04	32°19'28.425"N	103°48'54.664"W	0.00	
13043 00†	88.429	90.132	7595.98	4678.87	-3023.42	3868.56	701489.96	482194.81	32°19'28.418"N	103°48'53.499"W	0.00	
13143 00†	88.429	90.132	7598.72	4772.67	-3023.65	3968.52	701589.91	482194.58	32°19'28.411"N	103°48'52.335"W	0.00	
13243 00†	88.429	90.132	7601.46	4866.46	-3023.88	4068.48	701689.87	482194.35	32°19'28.404"N	103°48'51.170"W	0.00	
13343 00†	88.429	90.132	7604.20	4960.26	-3024.11	4168.45	701789.83	482194.12	32°19'28.397"N	103°48'50.005"W	0.00	
13443 00†	88.429	90.132	7606.94	5054.05	-3024.34	4268.41	701889.78	482193.89	32°19'28.390"N	103°48'48.840"W	0.00	
13543 00†	88.429	90.132	7609.69	5147.85	-3024.57	4368.37	701989.74	482193.66	32°19'28.383"N	103°48'47.675"W	0.00	
13643 00†	88.429	90.132	7612.43	5241.64	-3024.80	4468.33	702089.69	482193.43	32°19'28.376"N	103°48'46.510"W	0.00	
13743 00†	88.429	90.132	7615.17	5335.44	-3025.03	4568.29	702189.65	482193.20	32°19'28.369"N	103°48'45.345"W	0.00	
13843 00†	88.429	90.132	7617.91	5429.23	-3025.26	4668.26	702289.60	482192.97	32°19'28.362"N	103°48'44.180"W	0.00	
13943 00†	88.429	90.132	7620.65	5523.03	-3025.49	4768.22	702389.56	482192.74	32°19'28.354"N	103°48'43.016"W	0.00	
14043 00†	88.429	90.132	7623.39	5616.82	-3025.72	4868.18	702489.52	482192.51	32°19'28.347"N	103°48'41.851"W	0.00	
4143 00†	88.429	90.132	7626.13	5710.62	-3025.95	4968.14	702589.47	482192.28	32°19'28.340"N	103°48'40.686"W	0.00	
14243 00†	88.429	90.132	7628.88	5804.41	-3026.18	5068.10	702689.43	482192.05	32°19'28.333"N	103°48'39.521"W	0.00	
14343 00†	88.429	90.132	7631.62	5898.20	-3026.41	5168.07	702789.38	482191.81	32°19'28.326"N	103°48'38.356"W	0.00	
14443 00†	88.429	90.132	7634.36	5992.00	-3026.64	5268.03	702889.34	482191.58	32°19'28.319"N	103°48'37.191"W	0.00	
14543 00†	88.429	90.132	7637.10	6085.79	-3026.87	5367.99	702989.29	482191.35	32°19'28.312"N	103°48'36.026"W	0.00	
14643 00†	88.429	90.132	7639.84	6179.59	-3027.10	5467.95	703089.25	482191.12	32°19'28.305"N	103°48'34.861"W	0.00	
14743 00†	88.429	90.132	7642.58	6273.38	-3027.33	5567.92	703189.20	482190.89	32°19'28.298"N	103°48'33.697"W	0.00	
14843 00†	88.429	90.132	7645.32	6367.18	-3027.56	5667.88	703289.16	482190.66	32°19'28.290"N	103°48'32.532"W	0.00	
14943 00†	88.429	90.132	7648.06	6460.97	-3027.79	5767.84	703389.12	482190.43	32°19'28.283"N	103°48'31.367"W	0.00	
15043 00†	88.429	90.132	7650.81	6554.77	-3028.02	5867.80	703489.07	482190.20	32°19'28.276"N	103°48'30.202"W	0.00	
15143 00†	88.429	90.132	7653.55	6648.56	-3028.25	5967.76	703589.03	482189.97	32°19'28.269"N	103°48'29.037"W	0.00	
15243 00†	88.429	90.132	7656.29	6742.36	-3028.48	6067.73	703688.98	482189.74	32°19'28.262"N	103°48'27.872"W	0.00	





# Planned Wellpath Report

Prelim\_3

Page 5 of 6



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 110H SHL
Area	Eddy County, NM	Well	No. 110H
Field	JRU Project	Wellbore	No. 110H PBHL
Facility	JRU No. 110H		

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

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5343.00†	88.429	90.132	7659.03	6836.15	-3028.71	6167.69	703788.94	482189.51	32°19'28.255"N	103°48'26.707"W	0.00	
15443.00†	88.429	90.132	7661.77	6929.95	-3028.94	6267.65	703888.89	482189.28	32°19'28.248"N	103°48'25.542"W	0.00	
15543.00†	88.429	90.132	7664.51	7023.74	-3029.17	6367.61	703988.85	482189.05	32°19'28.241"N	103°48'24.377"W	0.00	
15643.00†	88.429	90.132	7667.25	7117.54	-3029.40	6467.57	704088.81	482188.82	32°19'28.233"N	103°48'23.213"W	0.00	
15743.00†	88.429	90.132	7670.00	7211.33	-3029.63	6567.54	704188.76	482188.59	32°19'28.226"N	103°48'22.048"W	0.00	
15843.00†	88.429	90.132	7672.74	7305.13	-3029.86	6667.50	704288.72	482188.36	32°19'28.219"N	103°48'20.883"W	0.00	
15943.00†	88.429	90.132	7675.48	7398.92	-3030.09	6767.46	704388.67	482188.13	32°19'28.212"N	103°48'19.718"W	0.00	
16043.00†	88.429	90.132	7678.22	7492.71	-3030.32	6867.42	704488.63	482187.90	32°19'28.205"N	103°48'18.553"W	0.00	
16143.00†	88.429	90.132	7680.96	7586.51	-3030.55	6967.39	704588.58	482187.67	32°19'28.198"N	103°48'17.388"W	0.00	
16243.00†	88.429	90.132	7683.70	7680.30	-3030.78	7067.35	704688.54	482187.44	32°19'28.191"N	103°48'16.223"W	0.00	
16343.00†	88.429	90.132	7686.44	7774.10	-3031.01	7167.31	704788.50	482187.21	32°19'28.183"N	103°48'15.058"W	0.00	
16443.00†	88.429	90.132	7689.19	7867.89	-3031.24	7267.27	704888.45	482186.98	32°19'28.176"N	103°48'13.894"W	0.00	
16543.00†	88.429	90.132	7691.93	7961.69	-3031.47	7367.23	704988.41	482186.75	32°19'28.169"N	103°48'12.729"W	0.00	
16643.00†	88.429	90.132	7694.67	8055.48	-3031.70	7467.20	705088.36	482186.52	32°19'28.162"N	103°48'11.564"W	0.00	
16743.00†	88.429	90.132	7697.41	8149.28	-3031.93	7567.16	705188.32	482186.29	32°19'28.155"N	103°48'10.399"W	0.00	
16843.00†	88.429	90.132	7700.15	8243.07	-3032.16	7667.12	705288.27	482186.06	32°19'28.148"N	103°48'09.234"W	0.00	
16943.00†	88.429	90.132	7702.89	8336.87	-3032.39	7767.08	705388.23	482185.83	32°19'28.140"N	103°48'08.069"W	0.00	
17043.00†	88.429	90.132	7705.63	8430.66	-3032.62	7867.04	705488.18	482185.60	32°19'28.133"N	103°48'06.904"W	0.00	
17143.00†	88.429	90.132	7708.38	8524.46	-3032.85	7967.01	705588.14	482185.37	32°19'28.126"N	103°48'05.739"W	0.00	
17243.00†	88.429	90.132	7711.12	8618.25	-3033.08	8066.97	705688.10	482185.14	32°19'28.119"N	103°48'04.575"W	0.00	
17343.00†	88.429	90.132	7713.86	8712.05	-3033.31	8166.93	705788.05	482184.91	32°19'28.112"N	103°48'03.410"W	0.00	
17348.15	88.429	90.132	7714.00 <sup>†</sup>	8716.88	-3033.32	8172.08	705793.20	482184.90	32°19'28.111"N	103°48'03.350"W	0.00	No. 110H PBHL





# Planned Wellpath Report

Prelim\_3

Page 6 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 110H SHL
Area	Eddy County, NM	Well	No. 110H
Field	JRU Project	Wellbore	No. 110H PBHL
Facility	JRU No. 110H		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 110H TGT		7520.00	-3080.83	1531.85	699153.40	482137.40	32°19'27.961"N	103°49'20.733"W	point
1) No. 110H PBHL	17348.15	7714.00	-3033.32	8172.08	705793.20	482184.90	32°19'28.111"N	103°48'03.350"W	point

SURVEY PROGRAM Ref Wellbore: No. 110H PBHL Ref Wellpath: Prelim_3			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Wellbore
19.00	17348.15	NaviTrak (Standard)	No. 110H PBHL



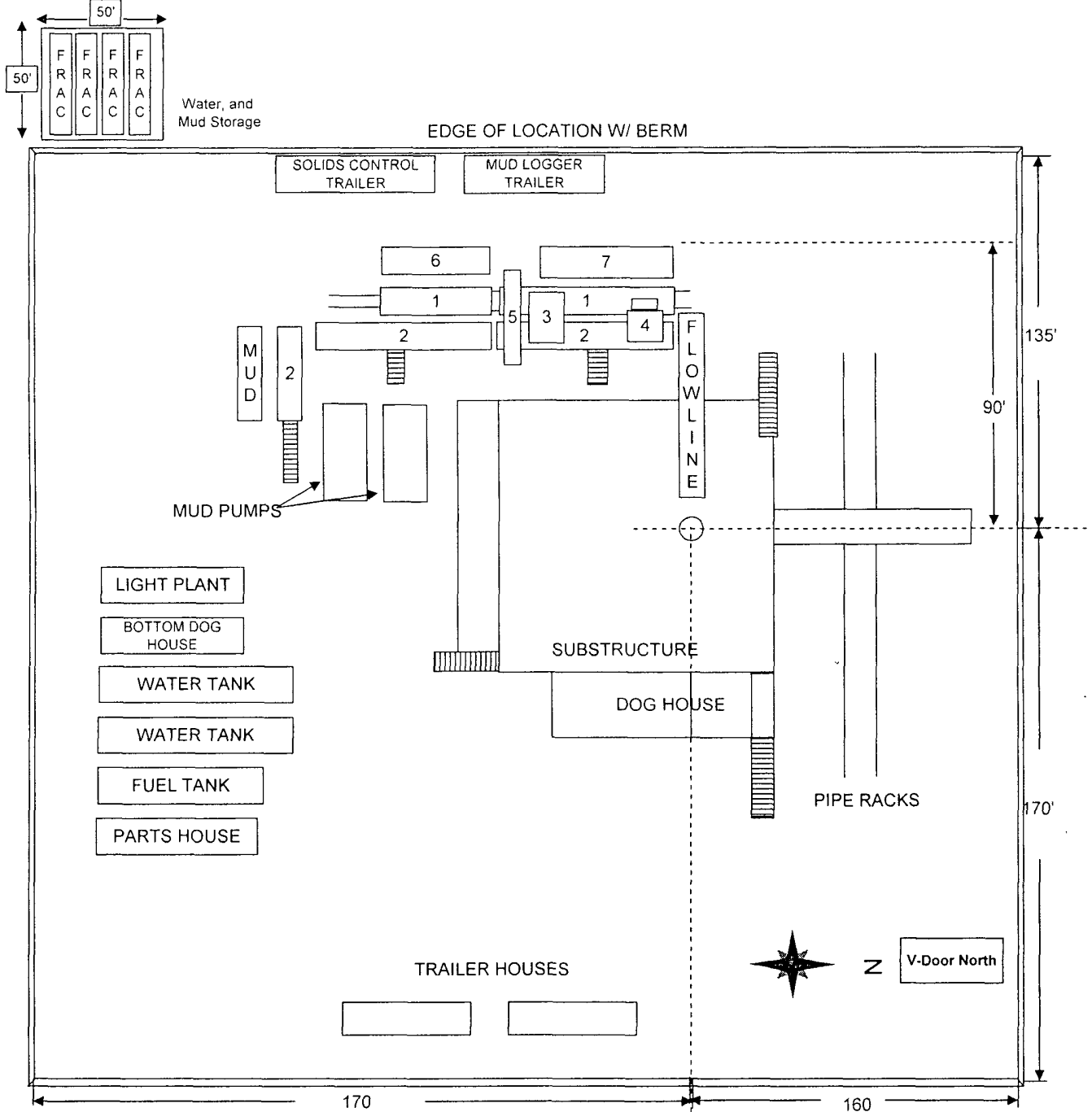


BOPCO, L.P.  
James Ranch Unit #110H  
Sec1,T23S-R30E  
Eddy County, NM

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       |                    |





## 5-M WP BOPE WITH 5-M WP ANNULAR

5 M CHOKE MANIFOLD EQUIPMENT-CONFIGURATION MAY VARY

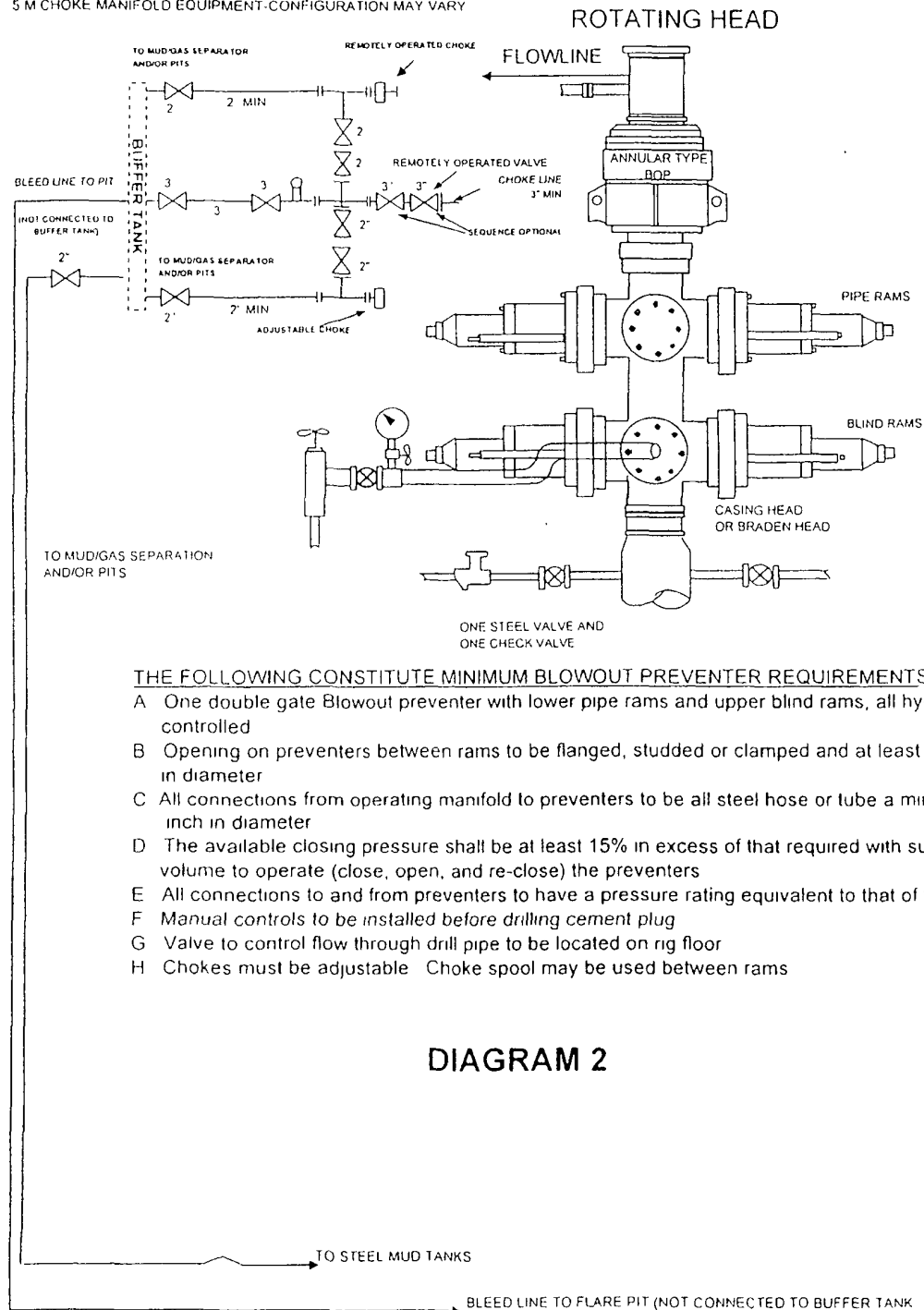


DIAGRAM 2



## **MULTI-POINT SURFACE USE PLAN**

### **NAME OF WELL: James Ranch Unit #110H**

LEGAL DESCRIPTION - SURFACE: 2235' FSL, 530' FEL, Section 1, T23S, R30E, Eddy County, NM.  
BHL: 660' FNL, 2310' FWL, Section 8, T23S, R31E, Eddy County, New Mexico.

### **POINT 1: EXISTING ROADS**

A) Proposed Well Site Location:

See Exhibit "A".

B) Existing Roads.

From the junction of State Hwy 128 and WIPP Road, go northeasterly on WIPP Road 0.5 miles to lease road. On lease road go 0.1 miles to well pad and proposed location.

C) Existing Road Maintenance or Improvement Plan:

See Exhibit "B" & "C"

### **POINT 2: NEW PLANNED ACCESS ROUTE**

A) Route Location:

Approximately 100' of new road will be built from existing James Ranch Unit #38 location. (See Exhibits "B" & "C")

B) Width

12' wide

C) Maximum Grade

Grade to match existing topography or as per BLM requirements.

D) Turnout Ditches

As required by BLM stipulations

E) Culverts, Cattle Guards, and Surfacing Equipment

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

### **POINT 3: LOCATION OF EXISTING WELLS**

Exhibits "A" indicates existing wells within the surrounding area.



#### POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

Page 2

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

The BOPCO operated James Ranch Unit #36 Battery is located in the SW quarter of NE quarter of Sec 1, T23S, R30E.

- B) New Facilities in the Event of Production:

New production facilities will not be installed at the new location. Additional separators and heater/treaters will be added as needed at the James Ranch Unit #36 Battery. Proposed flow lines and power lines are displayed in Exhibit "E". 2-7/8" steel flow lines will follow existing roads and will be laid on top of the ground to James Ranch Unit #36 Battery. Power lines will be extended from existing lines (See Exhibit "E").

- C) Rehabilitation of Disturbed Areas Unnecessary for Production.

Following the construction, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with 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 hauling 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 Exhibits "B" & "C".



## POINT 7: METHODS FOR HANDLING WASTE MATERIAL

Page 3

### A) Cuttings – Closed Loop System

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

### B) Drilling Fluids – Closed Loop System

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.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in test tanks.

### 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 electric log analysis indicate potential productive zones. 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 of the well pad and closed loop system, and the location of major rig components. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.



- B) Locations of closed loop system and access road

See Exhibits "D".

- C) Lining of the Pits

No reserve pit. Closed loop system.

**POINT 10: PLANS FOR RESTORATION OF THE SURFACE**

- A) Reserve Pit Cleanup - Not applicable (see Point 9C above).

The pits will be fenced immediately after construction and shall be maintained until they are backfilled. Previous to backfill operations, any hydrocarbon material on the pits' surfaces shall be removed. The fluids and solids contained in the pits shall be backfilled with soil excavated from the site and soil adjacent to the reserve pits. The restored surface of the pits shall be contoured to prevent impoundment of surface water flow. Water-bars will be constructed as needed to prevent excessive erosion. Topsoil, as available, shall be placed over the restored surface in a uniform layer. The area will be seeded according to the Bureau of Land Management stipulations during the appropriate season following restoration.

- B) Restoration Plans - Production Developed

In addition, 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 Bureau of Land Management's stipulations.

- D) Rehabilitation's 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

Page 5

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

The closest known fresh water wells are located in Sec 35 and Sec 24, T22S, R30E and in Sec 5, T23S, R31E. In all cases the wells are over 1 mile from proposed location.

G) Residences and Buildings

Mills ranch house is located approximately 3/8 of a mile east of this location.

H) Historical Sites

None observed.

I) Archeological Resources

A payment of \$1339.00 will be submitted to the BLM (MOA) with this APD to cover archeological studies associated with this well location. A separate check in the amount of \$1854 (\$1236.00 for flowline and \$618 for electric line) payable to BLM for archeological studies will also be included with this application.

J) Surface Ownership

The well site is on <sup>FED</sup>state owned land. There will be no new access roads required for this location.

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

L) Open Pits - None used. Closed loop system.



**POINT 12: OPERATOR'S FIELD REPRESENTATIVE**

Page 6

(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

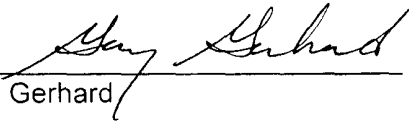
Carlos Cruz  
Box 2760  
Midland, Texas 79702  
(432) 683-2277

3/22/10

Date

GEG/mac

Gary Gerhard





## OPERATOR CERTIFICATION

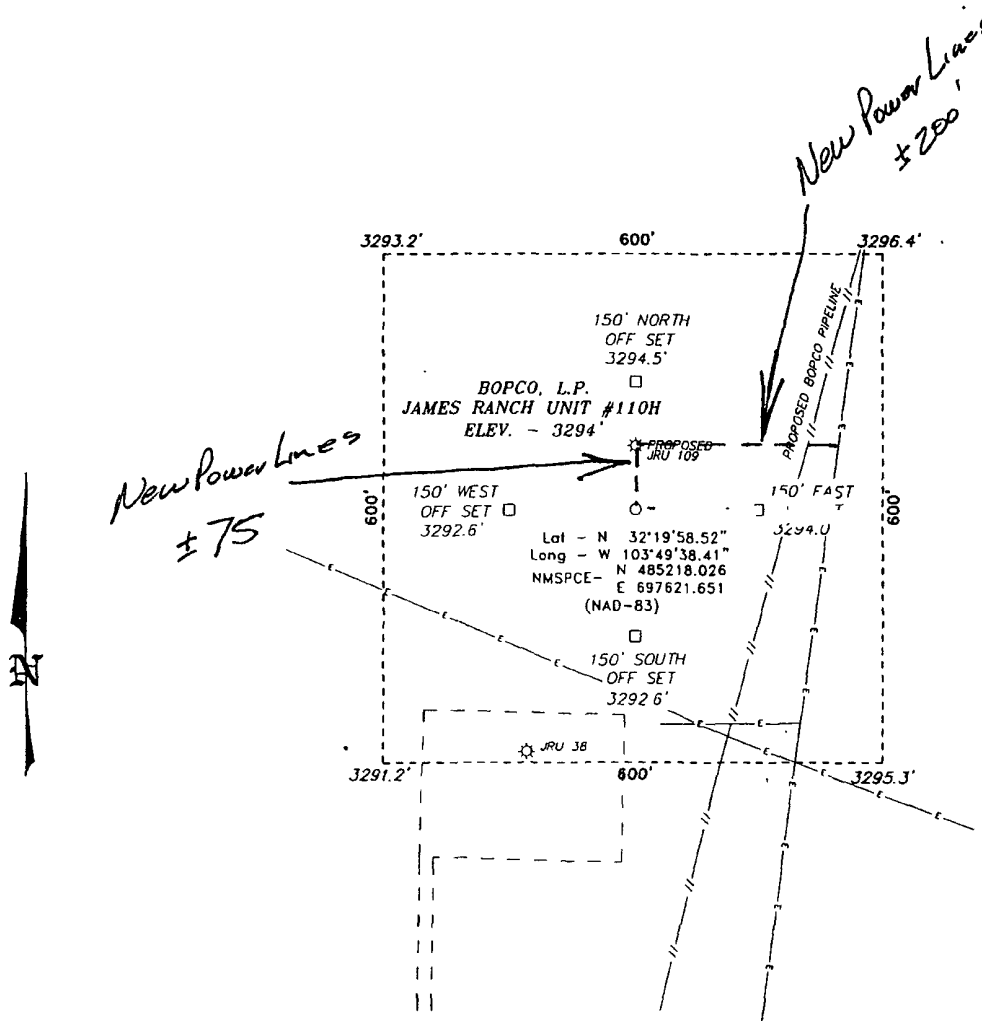
I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by BOPCO, L.P. and its 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.

3/22/10  
Date

Gary Gerhard  
Gary Gerhard

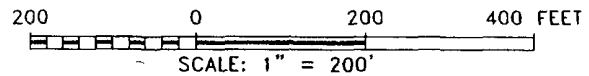


SECTION 1, TOWNSHIP 23 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location

FROM THE JUNCTION OF STATE HWY 128 AND WIPP,  
GO NORTHEASTERLY ON WIPP 0.5 MILES TO LEASE  
ROAD, ONE LEASE ROAD GO WEST 0.1 MILES TO  
WELL PAD AND PROPOSED LOCATION



**BOPCO, L.P.**

REF JAMES RANCH UNIT #110H / WELL PAD TOPO

THE JAMES RANCH UNIT #110H LOCATED 2235'  
FROM THE SOUTH LINE AND 530' FROM THE EAST LINE OF  
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 30 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

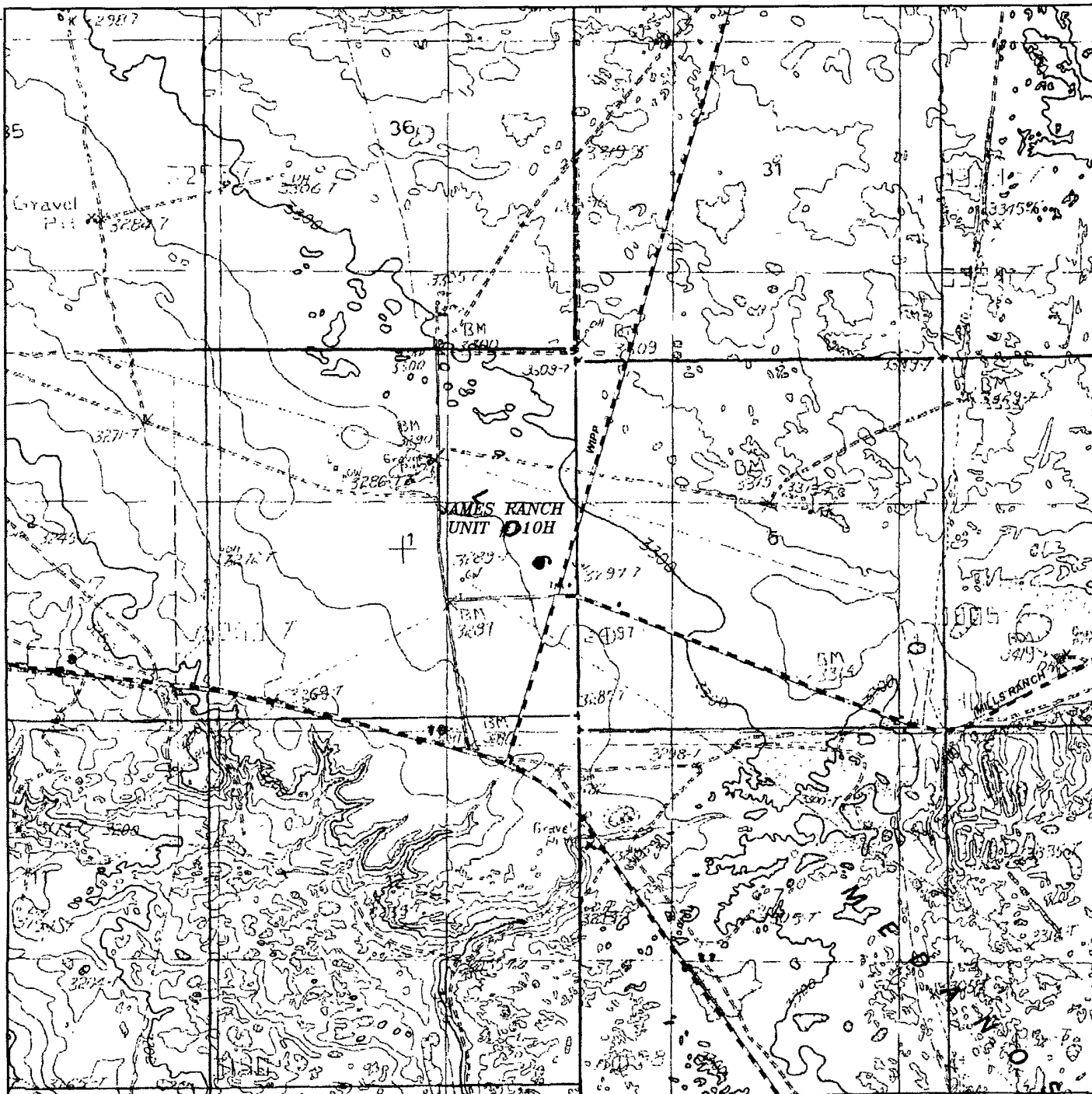
W.O. Number 22334 Drawn By J. SMALL

Date 02-12-2010 Disk JMS 22334

Survey Date 02-12-2010

Sheet 1 of 1 Sheets





JAMES RANCH UNIT #110H  
 Located 2235' FSL and 530' FEL  
 Section 1, Township 23 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 22334

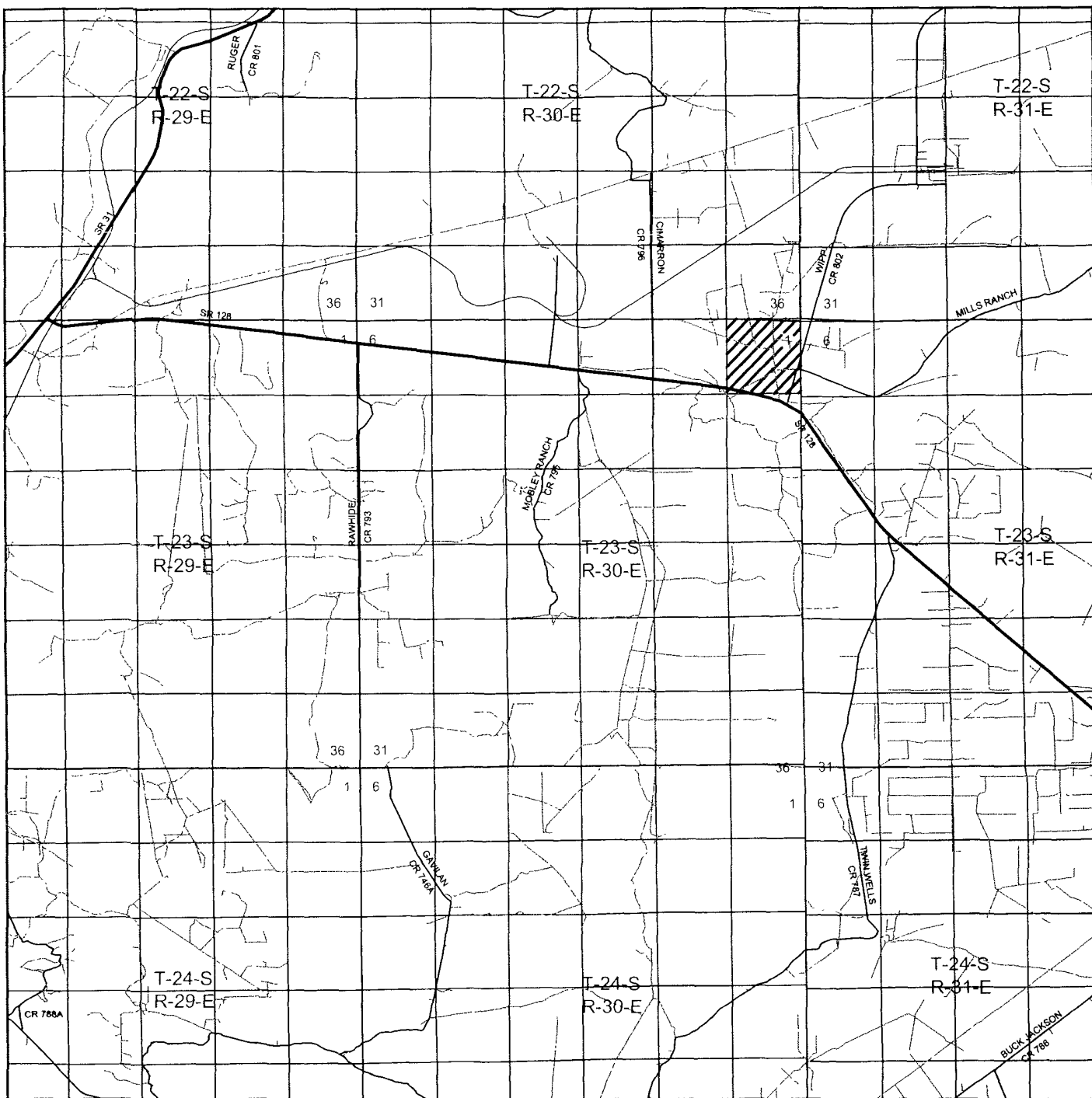
Survey Date. 02-12-2010

Scale: 1" = 2000'

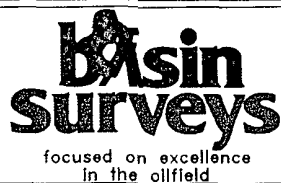
Date 02-15-2010

BOPCO, L.P.





**JAMES RANCH UNIT #110H**  
 Located 2235' FSL and 530' FEL  
 Section 1, Township 23 South, Range 30 East,  
 N.M.P.M., Eddy County, New Mexico.



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W.O. Number: JMS 22334

Survey Date: 02-12-2010

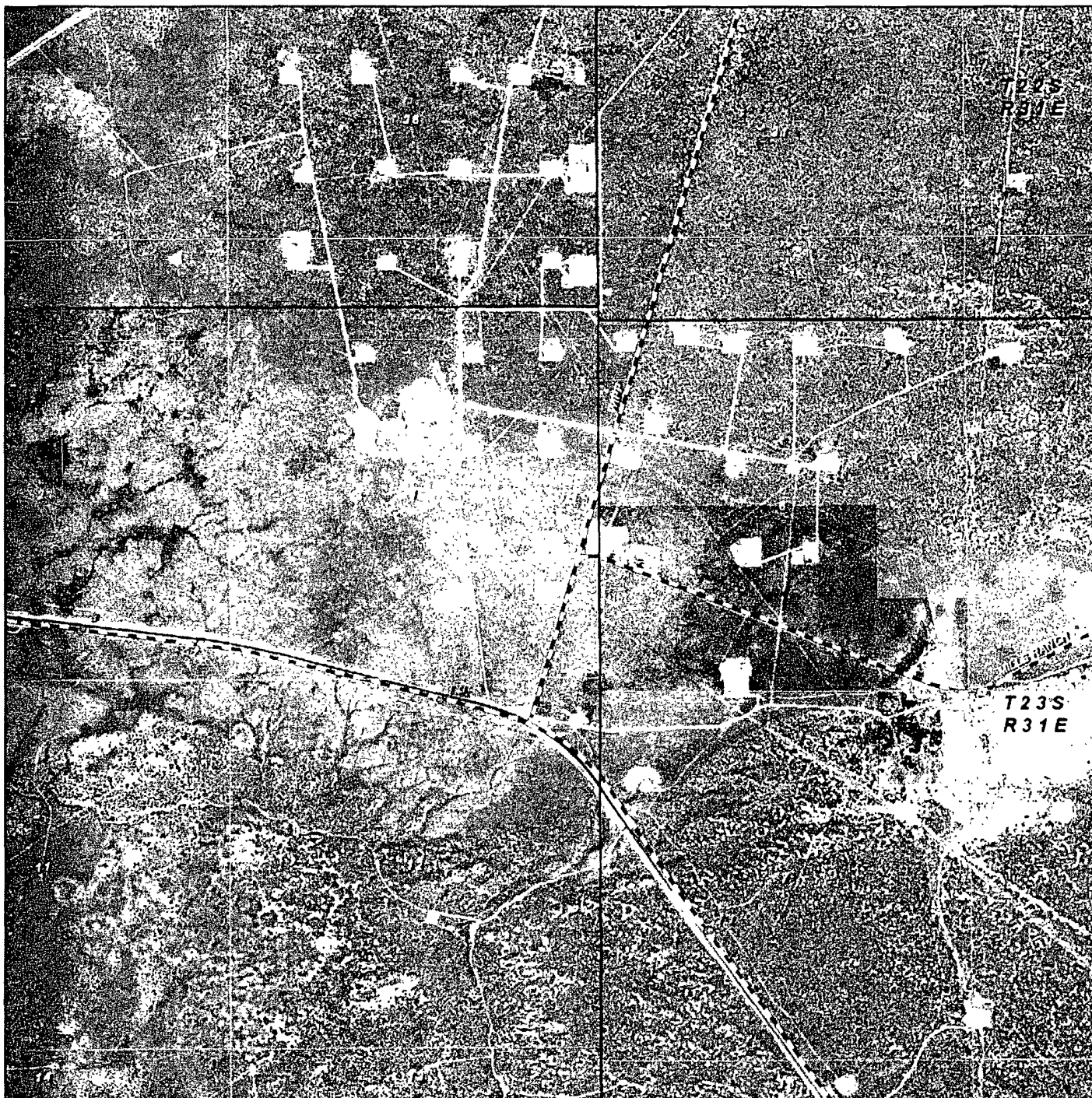
Scale: 1" = 2 Miles

Date: 02-15-2010



*BOPCO, L.P.*





JAMES RANCH UNIT #110H  
 Located 2235' FSL and 530' FEL  
 Section 1, Township 23 South, Range 30 East,  
 N.M.P.M., Eddy County, New Mexico.

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 in the oilfield

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W O Number JMS 22334

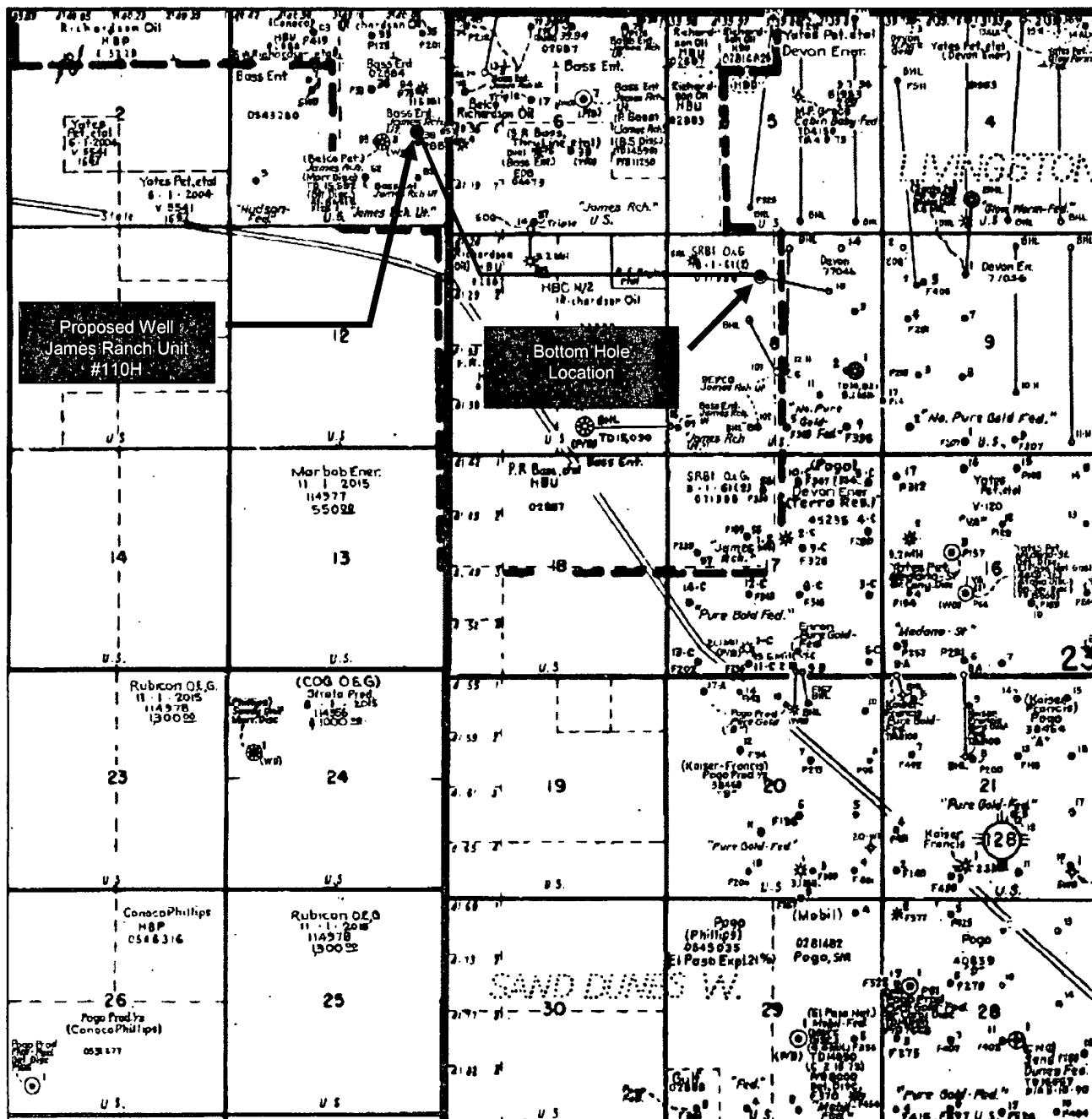
Scale 1" = 2000'

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

*BOPCO, L.P.*



# James Ranch Unit #110H Exhibit "A"



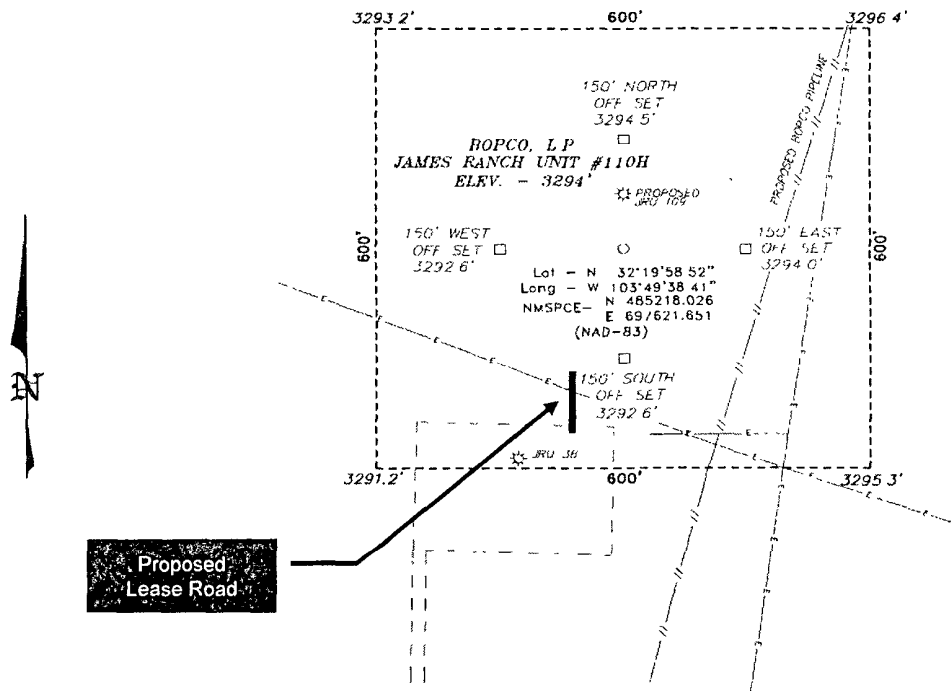


# James Ranch Unit #110H

## Exhibit "B"



SECTION 1, TOWNSHIP 23 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 STATE HWY 12B AND WIPP,  
GO NORTHEASTERLY ON WIPP 0.5 MILES TO LEASE  
ROAD, ONE LEASE ROAD GO WEST 0.1 MILES TO  
WELL PAD AND PROPOSED LOCATION.

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

W.O. Number 22334 Drawn By. J. SMALL

Date 02-12-2010 Disk JMS 22334

**BOPCO, L.P.**

REF JAMES RANCH UNIT #110H / WELL PAD TOPO

THE JAMES RANCH UNIT #110H LOCATED 2235'

FROM THE SOUTH LINE AND 530' FROM THE EAST LINE OF

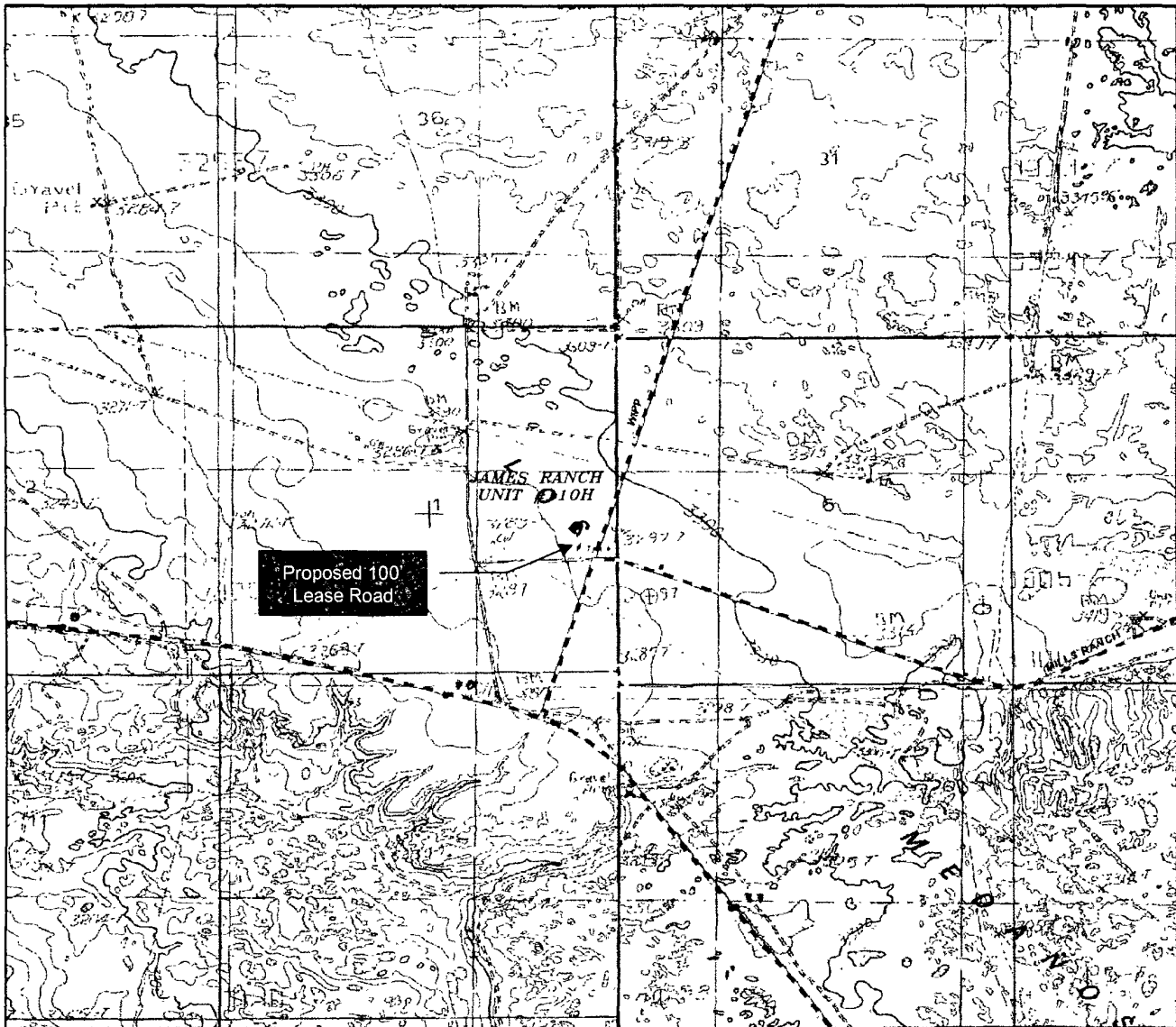
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 30 EAST,

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

Survey Date. 02-12-2010 Sheet 1 of 1 Sheets



James Ranch Unit #110H  
Exhibit "C"



JAMES RANCH UNIT #110H  
Located 2235' FSL and 530' FEL  
Section 1, Township 23 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

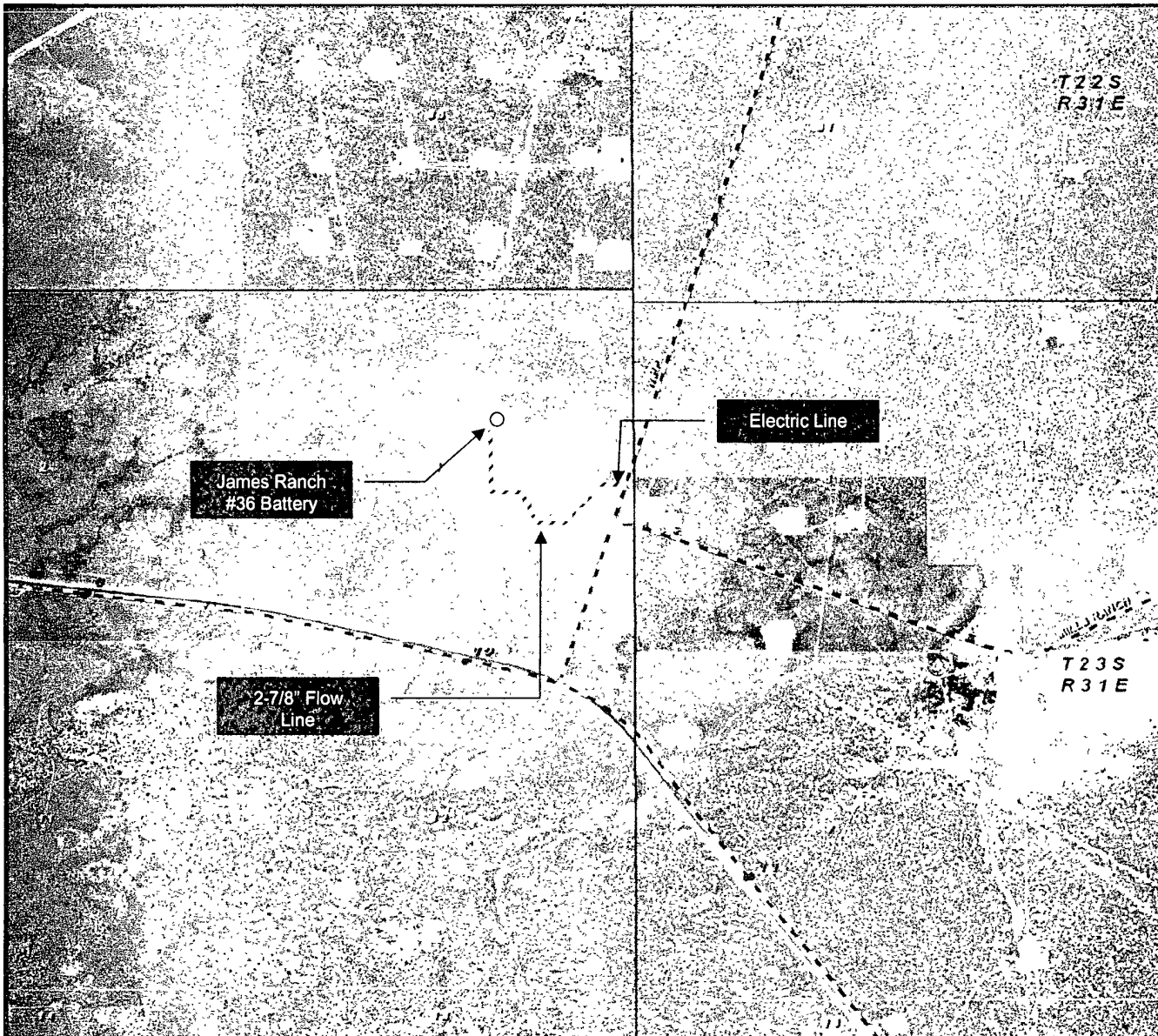
W O Number	JMS 22334
Survey Date.	02-12-2010
Scale.	1" = 2000'
Date	02-15-2010

BOPCO, L.P.



# James Ranch Unit #110H

## Exhibit "E"



JAMES RANCH UNIT #110H  
 Located 2235' FSL and 530' FEL  
 Section 1, Township 23 South, Range 30 East,  
 N.M.P.M., Eddy County, New Mexico.

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**surveys**  
 focused on a few acres  
 in the oilfield

P.O. Box 85  
 1150 N. West Canyon Rd.  
 Hobbs, New Mexico 88241  
 (505) 793-1516 - Office  
 (505) 297-2796 - Cell  
 basinsurveys.com

2. 11.0 N. West Canyon Rd.  
 Hobbs, New Mexico 88241  
 (505) 793-1516 - Office  
 (505) 297-2796 - Cell  
 basinsurveys.com

BOPCO, L.P.



# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L. P.
LEASE NO.:	NMLC 71988B
WELL NAME & NO.:	JAMES RANCH UNIT #110H
SURFACE HOLE FOOTAGE:	2235' FSL & 530' FEL, SEC. 1, T. 23 S, R 30 E.
BOTTOM HOLE FOOTAGE	660' FNL & 2310' FWL, SEC. 8, T. 23 S, R 31 E.
	NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

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

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Solid Waste
  - On-site Caliche
  - Cave/Karst – High
  - Commercial Well Determination
  - UPOD
- ☐ **Construction**
  - Notification
  - V-Door Direction – not stipulated
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - R-111-P Potash
  - High Cave/Karst
  - Logging Requirements
  - H2S – Onshore Order 6
  - Casing/Cement
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines – See Standard Stipulations for Surface Installed PL



Electric Lines – See Standard Stipulations for Overhead Electric Dist. Lines

☐ **Interim Reclamation**

☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

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

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## **II. PERMIT EXPIRATION**

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

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

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

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult



with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

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

Operator shall separate top-soil from any other materials placed on location as a result of “flipping” surface materials to expose and/or extract caliche from underneath the well-pad location.

Use of sub-surface, on-site caliche requires a salable minerals contract prior to the start of construction.

---

### **Cave and Karst**

**\*\*** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

#### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

##### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

##### **No Blasting:**

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

##### **Pad Berming:**

The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

##### **Tank Battery Liners and Berms:**

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

##### **Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing



electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems:**

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

**Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and ground water concerns:

**Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

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**Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

**Commercial Well Determination**

**Well is outside of NMNM – 070965F participating area. A commercial well determination will need to be submitted after production has been established for at least six months.**



## **Plan of Development**

**Sub-operator is to submit a Unit Plan of Development (UPOD) annually to the Unit operator for submission to the BLM. Guidelines for UPOD are available upon request at the BLM Carlsbad Field Office.**

### **VI. CONSTRUCTION**

#### **A. NOTIFICATION**

---

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

#### **B. V-DOOR DIRECTION: not stipulated**

#### **C. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 8 inches in depth. The topsoil will be used for interim and final reclamation.

Operator shall separate top-soil from any other materials placed on location as a result of “flipping” surface materials to expose and/or extract caliche from underneath the well-pad location.

#### **D. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

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

#### **E. FEDERAL MINERAL MATERIALS PIT**

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

#### **F. WELL PAD SURFACING**



Surfacing of the well pad is not required.

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

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

## **G. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

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

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

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

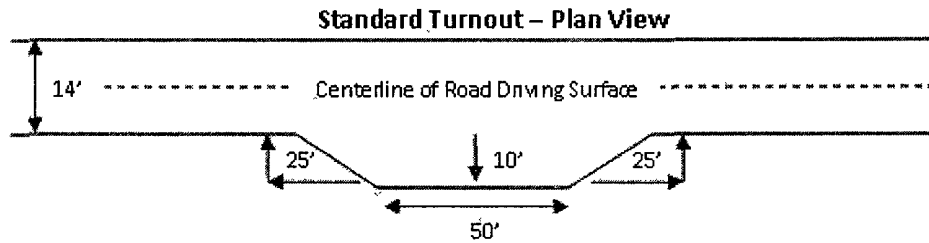
### **Crowning**

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

### **Turnouts**

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



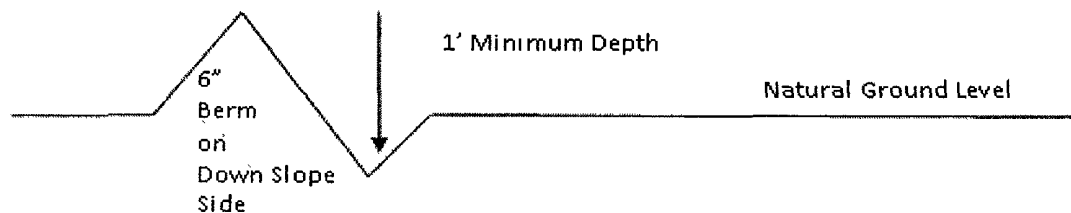


### **Drainage**

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

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

### **Cross Section of a Typical Lead-off Ditch**



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

### **Formula for Spacing Interval of Lead-off Ditches**

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

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

### **Culvert Installations**

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

### **Cattleguards**

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



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

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

**Fence Requirement**

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

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

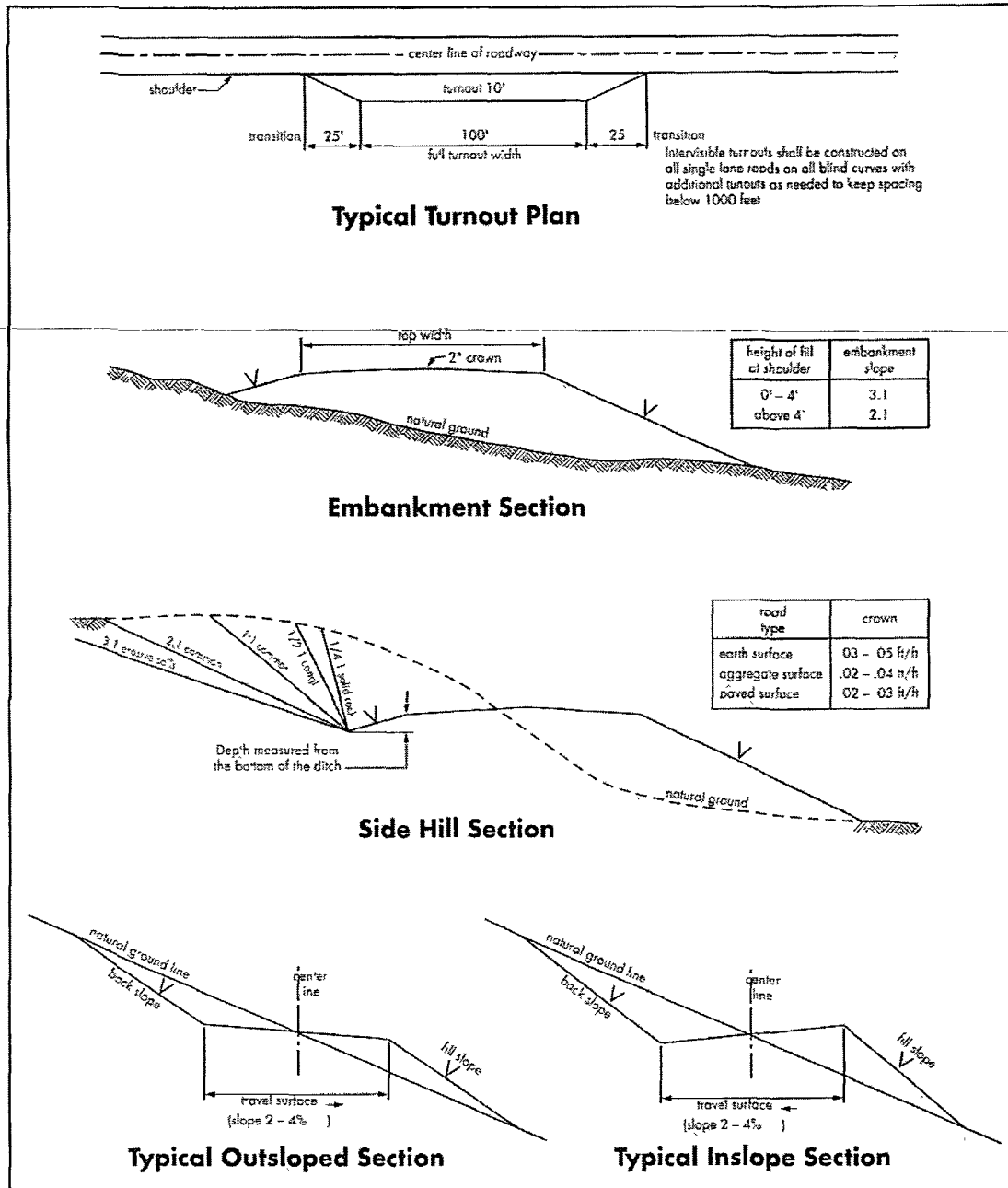
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**Public Access**

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



Figure 1 – Cross Sections and Plans For Typical Road Sections





## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Eddy County**

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

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1. **Due to recent H<sub>2</sub>S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

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

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



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

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

**High Cave/Karst**

**R-111-P Potash**

**Possible water and brine flows in the Salado and Casitle groups.**

**Possible lost circulation and water flows in the Delaware and Bone Spring.**

1. The 13-3/8 inch surface casing shall be set at **approximately 651 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **If salt is penetrated, set casing shoe 10 feet above the top of salt.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with 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. Set in the Lamar Limestone.**



3. The minimum required fill of cement behind the 7 inch production casing is:
  - a. First stage to DV tool, cement shall:
    - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool, cement shall:
    - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.**
4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
  - ☒ Packer system to be used – No Cement required.
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

### C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi. 5M system tested as a 2M.**
  - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 intermediate casing shoe shall be **3000 (3M) psi. 5M system tested as a 3M**



4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. Casing cut-off and BOP installation will not be initiated until the cement has had a minimum of 8 hours setup time for a water basin. The casing shall remain stationary and under pressure for at least eight hours after the operator places the cement. In the potash area, the minimum time is 12 hours and the casing shall remain stationary and under pressure during this time period. Casing shall be under pressure if the operator uses some acceptable means of holding pressure or if the operator employs one or more float valves to hold the cement in place. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
  - ~~b. The tests shall be done by an independent service company utilizing a test plug.~~
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

#### **D. DRILL STEM TEST**

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

#### **E. WIPP Requirements**

**The proposed well is located within 330' of the WIPP Land Withdrawal Area boundary. As a result, BOPCO, L.P. is required to submit daily logs and deviation survey information to the Department of Energy per requirements of the Joint Powers Agreement. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Any future entry into the well for purposes of completing additional drilling will require supplemental information.**

**BOPCO, L.P. can email the required information to Mr. Mel Balderrama at [melvin.balderama@wipp.ws](mailto:melvin.balderama@wipp.ws) or fax to his attention at 575-234-6062.**

**DHW 042110**



## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

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

#### **Containment Structures**

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

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#### **Painting Requirement**

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

### **B. PIPELINES – 2 7/8” Surface Steel Flowline**

#### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.



3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full



expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 12 feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

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9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline



route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

### C. ELECTRIC LINES –

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#### STANDARD STIPULATIONS - OVERHEAD ELECTRIC DISTRIBUTION LINES

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.



4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:



- Limit all disturbance to authorized width of approved access road.
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

## **IX. INTERIM RECLAMATION**

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

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

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

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

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

## **X. FINAL ABANDONMENT & RECLAMATION**

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

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

After all disturbed areas have been satisfactorily prepared; these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by



drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

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

#### Seed Mixture 2, for Sandy Sites

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

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

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

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

\*Pounds of pure live seed:

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