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ATS-10-412

Form 3160-3
(April 2004)

R-111-POTASH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007 EA 10-635

5 Lease Serial No 77C-46
BHL NM02887, NM71988 - SHL

6 If Indian, Allotee or Tribe Name

7 If Unit or CA Agreement, Name and No

8 Lease Name and Well No <306407>
James Ranch Unit #120H

1a Type of work ☑ DRILL ☐ REENTER

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

2 Name of Operator
BOPCO, L. P. <260737>

9 API Well No
30-015-38116

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

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

10 Field and Pool, or Exploratory <50443>
Quahada Ridge SE (Delaware)

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **SWSE, UL O, 290' FSL, 1990' FEL, Lat N32.312533, Long W103 797769**
At proposed prod zone **660' FSL, 330' FWL, Sec 7, T23S, R31E, Lt N32.313508, Lg W103 824569**

11 Sec, T R M or Blk and Survey or Area
Sec 8, T23S, R31E, Mer NMP

14 Distance in miles and direction from nearest town or post office*
17 miles east of Malaga, NM

12 County or Parish
Eddy County

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg unit line if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
290'	**5512.5**	**240**
18 Distance from proposed location* to nearest well drilling, completed, applied for, on this lease ft	19 Proposed Depth	20 BLM/BIA Bond No on file
489'	**15,836' MD, ~~8287~~ 7752' TVD** as per Gary Gerhard.	**COB000050**
21 Elevations (Show whether DF KDB, RT GL, etc)	22 Approximate date work will start*	23 Estimated duration
3325' GL	**09/01/2010**	**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
2 A Drilling Plan
3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5 Operator certification
6 Such other site specific information and/or plans as may be required by the authorized officer

25 Signature	Name *(Printed/Typed)*	Date
Annette Childers	**Annette Childers**	3-22-2010

Title **Regulatory Clerk**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/S/ JONY J. HERRELL	/S/ JONY J. HERRELL	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 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

Carlsbad Controlled Water Basin

OCD CONDITION OF APPROVAL for Drilling
Intent to drill ONLY -- CANNOT produce until the Non-Standard Location has been approved by OCD Santa Fe office

SEE ATTACHED FOR CONDITIONS OF APPROVAL

KZ 6/30/10

Approval Subject to General Requirements & 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

OIL CONSERVATION DIVISION

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

Form C-102
Revised October 15, 2009

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-05-38116	~~50470~~ 50443	Quahada Ridge SE (Delaware)

Property Code	Property Name	Well Number
306407	JAMES RANCH UNIT	120H

OGRID No	Operator Name	Elevation
260737	BOPCO, L.P	3325'

Surface Location

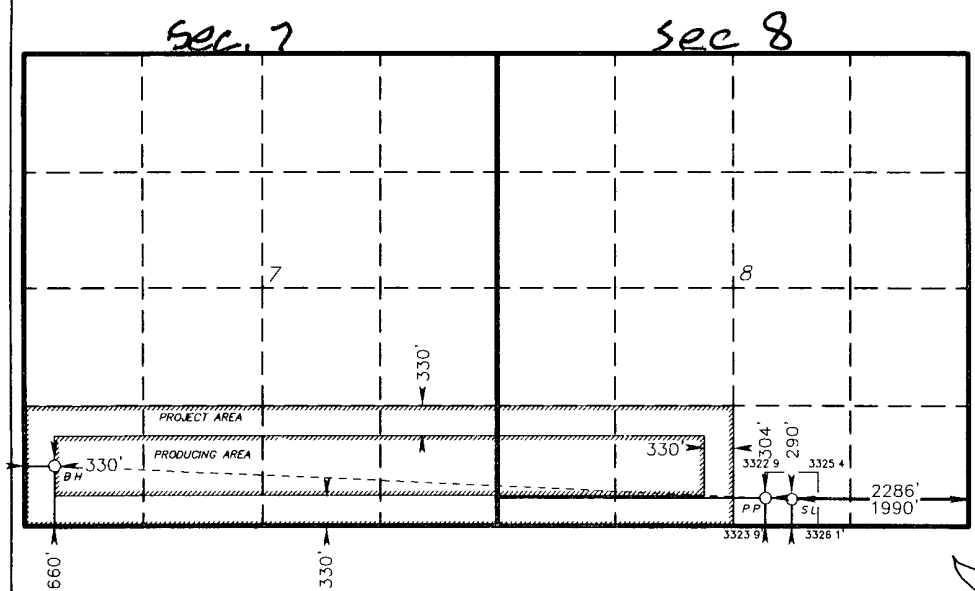
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	8	23 S	31 E		290	SOUTH	1990	EAST	EDDY

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
M	7	23 S	31 E	4	660	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No
240	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



PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°18'48.63"
Long - W 103°49'28 45"
NMSPCE- N 478159 198
E 698510 123
(NAD-83)

LO. BRUSHY CANYON "W" SAND PENETRATION POINT
Lat - N 32°18'45 25"
Long - W 103°47'55 43"
NMSPCE- N 477857 05
E 706494 35
(NAD-83)

DELAWARE PENETRATION POINT
Lat - N 32°18'45 12"
Long - W 103°47'51 97"
NMSPCE- N 477845 827
E 706791 004
(NAD-83)

SURFACE LOCATION
Lat - N 32°18'45 12"
Long - W 103°47'51 97"
NMSPCE- N 477845 827
E 706791 004
(NAD-83)

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Gary E. Gerhard 3/22/10
Signature Date

Gary E. Gerhard
Printed Name

SURVEYOR CERTIFICATION

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

FEBRUARY 08, 2010
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

NO. 2

Certificate No Gary L. Jones 7977

BASIN SURVEYS

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

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

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

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

7" casing will be set at approximately 8082' (thru curve) and cemented in two stages with DV Tool set at approximately 5000'. Cement will be circulated to surface.

Production liner will be 4-1/2" run, with Baker hydraulic packers for zone isolation Top of 4-1/2" liner will be approximately 200' above KOP (7275')

Drilling procedure, BOP diagram, and anticipated tops are attached

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

The surface is unorthodox and bottom hole location is orthodox

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

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: James Ranch Unit #120H
LEGAL DESCRIPTION - SURFACE: 290' FSL, 1990' FEL, Section 8, T23S, R31E, Eddy County, NM.
BHL 660' FSL, 330' FWL, Section 7, 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 3344' (estimated)
GL 3325'

FORMATION	ESTIMATED TOP FROM KB TVD	MD	ESTIMATED SUB-SEA TOP	BEARING
T/Rustler	406'	406'	+ 2,938'	Barren
T/Salt	727'	727'	+ 2,617'	Barren
B/Salt	3,820'	3,820'	- 476'	Barren
T/Lamar	4,053'	4,053'	- 709'	Barren
T/Ramsey	4,090'	4,090'	- 746'	Oil/Gas
T/Lower Cherry Canyon	6,291'	6,291'	- 2,947'	Oil/Gas
KOP	7,275'	7,275'	- 3,935'	Oil/Gas
T/Brushy Canyon "U" Sand	7,478'	7,485'	- 4,134'	Oil/Gas
T/Lwr Brushy Canyon "8A"	7,661'	7,725'	- 4,317'	Oil/Gas
T/Lwr Brushy Canyon "W" Sand	7,717'	7,840'	- 4,373'	Oil/Gas
EOC	7,752'	8,033'	- 4,408'	Oil/Gas
TD Horizontal Hole	7,629'	15,836'	- 4,285'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	Hole Size	PURPOSE	CONDITION
20"	0'- 60'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, 8rd, ST&C	0' - 717'	17-1/2"	Surface	New
9-5/8", 36#, J-55, 8rd, LT&C	0' - 4073'	12-1/4"	Intermediate	New
7", 26#, N-80, 8rd, LT&C	0' - 8083'	8/3/4"	Production	New
4-1/2", 11 6#, HCP-110, Ultra FJT	7,075' - 8083'	6-1/8"	Production	New
4-1/2", 11 6#, HCP-110, 8rd, LT&C	8,083' - 15,836'	6-1/8"	Production	New

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8rd, ST&C	10 73	2 08	2 38
9-5/8", 36#, J-55, 8rd, LT&C	2 41	1 24	1 08
7", 26#, N-80, 8rd, LT&C	2 83	1 50	1 45
4-1/2", 11 6#, HCP-110, Ultra FJT	3 13	2 11	2 13
4-1/2", 11 6#, HCP-110, 8rd, LT&C	3 13	2 11	2 13

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 a that depth Backup pressure will be formation pore pressure In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1 0 psi/ft gradient The effects of tension on burst will not be utilized

PROTECTIVE CASING - (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 Back pressure will be formation pore pressure In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1 0 psi/ft gradient

2ND 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

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

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

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

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 717'	FW Spud Mud	8 5 – 9 2	38-70	NC	NC	NC	10 0
717' - 4073'	Brine Water	9 8 – 10 2	28-30	NC	NC	NC	9 5 – 10 5
4073' - 8083'	FW/Gel	8 7 – 9 2	28-36	NC	NC	NC	9 5 – 10 0
8083' - 15,836'	FW/Gel	8 7 – 9 2	28-36	NC	NC	<100	9 5 – 10 0

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated

B) LOGGING

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

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

Run #3: GR/CNL from 9-5/8" casing shoe to surface run by production department as part of completion procedures

C) CONVENTIONAL CORING

None anticipated

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE:						
Lead 0 - 417' (100% excess Circ to surface)	350	417	Class "C" + 4% Extender + 2% $CaCl_2$	9 15	13 50	1 74
Tail 417' - 717' (100% excess)	335	300	Class "C" + 2% $CaCl_2$	6 35	14 80	1 34
INTERMEDIATE						
Lead 0' - 3573' (100% excess Circ to surface)	1100	3573	35/65 Poz + 5% NaCl + 0 20% Anti Foam + 6%+ Extender + 0 125 lb/sk Lost circulation material	11 44	12 60	2 08
Tail 3573' - 4073' (100% excess)	275	500	Class "C" cement	6 36	14 8	1 33
2^{ND} INTERMEDIATE						
Stage 1						
Lead 5000' - 8083' (50% excess)	350	3083	Lite CRETE + 3 lb/sk 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' (50% excess) (Circ to surface)	575	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 a 8-3/4" bit to a TVD of approximately 7275' At this depth an 8-3/4" directional hole will be initiated at an azimuth of 272 2°, building angle at 12 00°/100' to a max of 90.9° at a TVD of 7752' (MD 8033'). At this depth 7" casing will be installed with DV Tool at 5000', and cement circulated to surface A 6-1/8" open hole will be drilled thru the lateral to a MD of 15,836' (TVD 7629') 4-1/2" casing will be installed in the lateral using Baker Hydraulic packers to isolate 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 4090'-7752' TVD No H_2S 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

Estimated spud date 9/1/2010

30 days drilling operations

14 days completion operations

Gary E Gerhard

GEG/mac
March 17, 2010

BOPCO, L.P.

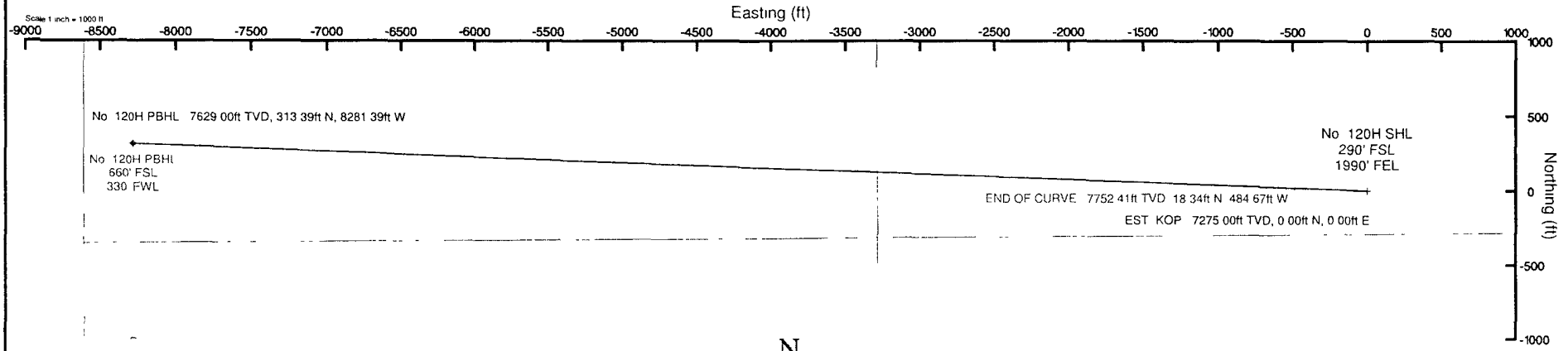
Location	Eddy County, NM	Slot	No 120H SHL
Field	JRU Project	Well	No 120H
Facility	JRU No 120H	Wellbore	No 120H PWB

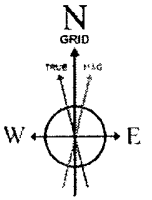
Plot reference wellpath is Prelim_2	
True vertical depths are referenced to Rig on No 120H SHL (RT)	Grid System NAD83 / TM New Mexico State Planes Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No 120H SHL (RT)	North Reference Grid north
Rig on No 120H SHL (RT) to Mean Sea Level 3344 feet	Scale True distance
Mean Sea Level to Mud line (Facility JRU No 120H) 3325 feet	Depths are in feet
Coordinates are in feet referenced to Surface Location	Created by Victor Hernandez on 3/9/2010

Well Profile Data

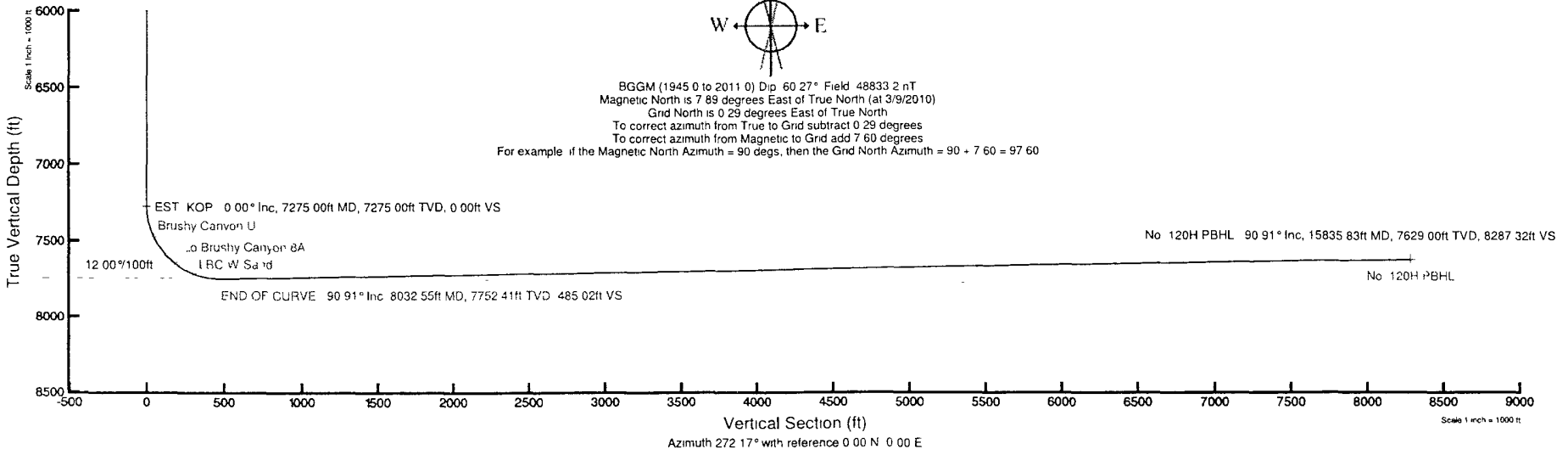
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0 00	0 000	272 167	0 00	0 00	0 00	0 00	0 00
EST KOP	7275 00	0 000	272 167	7275 00	0 00	0 00	0 00	0 00
END OF CURVE	8032 55	90 906	272 167	7752 41	18 34	-484 67	12 00	485 02
No. 120H PBHL	15835 83	90 906	272 167	7629 00	313 39	-8281.39	0 00	8287 32

BAKER HUGHES
INTEQ





BGGM (1945 0 to 2011 0) Dip 60 27° Field 48833 2 nT
Magnetic North is 7 89 degrees East of True North (at 3/9/2010)
Grid North is 0 29 degrees East of True North
To correct azimuth from True to Grid subtract 0 29 degrees
To correct azimuth from Magnetic to Grid add 7 60 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 60 = 97 60



Azimuth 272 17° with reference 0 00 N 0 00 E

Planned Wellpath Report

Prelim_2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 120H SHL**
Area	**Eddy County, NM**	Well	**No. 120H**
Field	**JRU Project**	Wellbore	**No. 120H PWB**
Facility	**JRU No. 120H**		

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	**0.99994**	Report Generated	**3/9/2010** at **4:25:55 PM**
Convergence at slot	**0.29° East**	Database/Source file	**WA_Midland/No._120H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[USft]**	**Northing[USft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	706791 00	477845 83	32°18'45 125"N	103°47'51 974"W
Facility Reference Pt			**706791.00**	**477845.83**	32°18'45 125"N	103°47'51 974"W
Field Reference Pt			**697621.65**	**485218.03**	32°19'58 517"N	103°49'38 415"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No 120H SHL (RT) to GL	**19.00ft**
Horizontal Reference Pt	**Surface Location**	Rig on No 120H SHL (RT) to Mean Sea Level	**3344.00ft**
Vertical Reference Pt	**Rig on No. 120H SHL (RT)**	GL to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No. 120H SHL (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**272.17°**

Planned Wellpath Report

Prelim_2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 120H SHL
Area	Eddy County, NM	Well	No. 120H
Field	JRU Project	Wellbore	No. 120H PWB
Facility	JRU No. 120H		

WELLPATH DATA (94 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	272 167	0 00	0 00	0 00	0 00	706791 00	477845 83	32°18'45 125"N	103°47'51 974"W	0 00	Tie On
7275 00	0.000	272 167	7275 00	0 00	0 00	0 00	706791 00	477845 83	32°18'45 125"N	103°47'51 974"W	0 00	EST KOP
7375 00†	12 000	272 167	7374 27	10 43	0 39	-10 43	706780 58	477846 22	32°18'45 129"N	103°47'52 095"W	12 00	
7475 00†	24 000	272 167	7469 20	41 28	1 56	-41 25	706749 76	477847 39	32°18'45 142"N	103°47'52 454"W	12 00	
7484.67†	25.161	272.167	7478.00	45.30	1.71	-45.27	706745 74	477847 54	32°18'45 144"N	103°47'52 501"W	12 00	Brushy Canyon U
7575 00†	36 000	272 167	7555 65	91 19	3 45	-91 12	706699 89	477849 28	32°18'45 163"N	103°47'53 035"W	12 00	
7675 00†	48 000	272 167	7629 83	157 98	5 97	-157 87	706633 15	477851 80	32°18'45 192"N	103°47'53 813"W	12 00	
7724 53†	53 943	272 167	7661 00	196 44	7 43	-196 30	706594 72	477853 25	32°18'45 208"N	103°47'54 261"W	12 00	Lo Brushy Canyon 8A
7775 00†	60 000	272 167	7688 50	238 73	9 03	-238 56	706552 46	477854 85	32°18'45 226"N	103°47'54 753"W	12 00	
7839.81†	67.778	272 167	7717.00	296.89	11 23	-296.67	706494.35	477857.05	32°18'45.251"N	103°47'55.430"W	12.00	LBC W Sand
7875 00†	72 000	272 167	7729 10	329 92	12 48	-329 68	706461 34	477858 30	32°18'45 265"N	103°47'55 815"W	12 00	
7975 00†	84 000	272 167	7749 85	427 56	16 17	-427 25	706363 78	477861 99	32°18'45 306"N	103°47'56 951"W	12 00	
8032 55	90 906	272 167	7752 41	485 02	18 34	-484 67	706306 37	477864 17	32°18'45 330"N	103°47'57 620"W	12 00	END OF CURVE
8075 00†	90 906	272 167	7751 73	527 46	19 95	-527 08	706263 95	477865 77	32°18'45 348"N	103°47'58 114"W	0 00	
8175.00†	90.906	272.167	7750.15	627.45	23.73	-627.00	706164.04	477869.55	32°18'45.391"N	103°47'59.278"W	0.00	
8275 00†	90 906	272 167	7748 57	727 43	27 51	-726 91	706064 13	477873 33	32°18'45 433"N	103°48'00 442"W	0 00	
8375 00†	90 906	272 167	7746 99	827 42	31 29	-826 83	705964 23	477877 11	32°18'45 475"N	103°48'01 606"W	0 00	
8475 00†	90 906	272 167	7745 41	927 41	35 07	-926 75	705864 32	477880 90	32°18'45 518"N	103°48'02 770"W	0 00	
8575 00†	90 906	272 167	7743 83	1027 40	38 85	-1026 66	705764 41	477884 68	32°18'45 560"N	103°48'03 934"W	0 00	
8675.00†	90.906	272.167	7742.25	1127.38	42.63	-1126.58	705664 50	477888 46	32°18'45.602"N	103°48'05.098"W	0.00	
8775 00†	90 906	272 167	7740 66	1227 37	46 41	-1226 49	705564 59	477892 24	32°18'45 645"N	103°48'06 262"W	0 00	
8875 00†	90 906	272 167	7739 08	1327 36	50 19	-1326 41	705464 68	477896 02	32°18'45 687"N	103°48'07 426"W	0 00	
8975 00†	90 906	272 167	7737 50	1427 35	53 98	-1426 33	705364 77	477899 80	32°18'45 729"N	103°48'08 590"W	0 00	
9075 00†	90 906	272 167	7735 92	1527 33	57 76	-1526.24	705264 86	477903 58	32°18'45 771"N	103°48'09 754"W	0 00	
9175 00†	90.906	272.167	7734.34	1627.32	61.54	-1626.16	705164.95	477907.36	32°18'45.814"N	103°48'10.918"W	0.00	
9275 00†	90 906	272 167	7732.76	1727 31	65 32	-1726 07	705065 04	477911 14	32°18'45 856"N	103°48'12 082"W	0 00	
9375 00†	90 906	272 167	7731 17	1827.30	69 10	-1825 99	704965 13	477914 92	32°18'45 898"N	103°48'13 246"W	0 00	
9475 00†	90 906	272 167	7729 59	1927 28	72 88	-1925 91	704865 22	477918 70	32°18'45 941"N	103°48'14 410"W	0 00	
9575 00†	90 906	272 167	7728 01	2027 27	76 66	-2025 82	704765 31	477922 48	32°18'45 983"N	103°48'15 574"W	0 00	
9675.00†	90.906	272.167	7726.43	2127.26	80.44	-2125.74	704665.40	477926.27	32°18'46 025"N	103°48'16.738"W	0.00	

Planned Wellpath Report

Prelim_2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 120H SHL
Area	Eddy County, NM	Well	No. 120H
Field	JRU Project	Wellbore	No. 120H PWB
Facility	JRU No. 120H		

WELLPATH DATA (94 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
9775 00†	90 906	272 167	7724 85	2227 25	84 22	-2225 65	704565 49	477930 05	32°18'46 068"N	103°48'17 902"W	0 00	
9875 00†	90 906	272 167	7723 27	2327 23	88 01	-2325 57	704465 58	477933 83	32°18'46 110"N	103°48'19 066"W	0 00	
9975 00†	90 906	272 167	7721 69	2427 22	91 79	-2425 49	704365 67	477937 61	32°18'46 152"N	103°48'20 230"W	0 00	
10056 01†	90 906	272 167	7720 41	2508 22	94 85	-2506 43	704284 73	477940 67	32°18'46 186"N	103°48'21 173"W	0 00	
10075.00†	90.906	272.167	7720.10	2527.21	95.57	-2525.40	704265.76	477941.39	32°18'46.194"N	103°48'21.394"W	0.00	
10175 00†	90 906	272 167	7718 52	2627 20	99 35	-2625 32	704165 85	477945 17	32°18'46 237"N	103°48'22 558"W	0 00	
10275 00†	90 906	272 167	7716 94	2727 18	103 13	-2725 23	704065 94	477948 95	32°18'46 279"N	103°48'23 722"W	0 00	
10375 00†	90 906	272 167	7715 36	2827 17	106 91	-2825 15	703966 03	477952 73	32°18'46 321"N	103°48'24 886"W	0 00	
10475 00†	90 906	272 167	7713 78	2927 16	110 69	-2925 07	703866 12	477956 51	32°18'46 363"N	103°48'26 050"W	0 00	
10575.00†	90.906	272.167	7712.20	3027.15	114 47	-3024.98	703766 21	477960.29	32°18'46.406"N	103°48'27.214"W	0.00	
10675 00†	90 906	272 167	7710 62	3127 13	118 25	-3124 90	703666 30	477964 07	32°18'46 448"N	103°48'28 378"W	0 00	
10775 00†	90 906	272 167	7709 03	3227 12	122 04	-3224 81	703566 39	477967 86	32°18'46 490"N	103°48'29 542"W	0 00	
10875 00†	90 906	272 167	7707 45	3327 11	125 82	-3324 73	703466 48	477971 64	32°18'46 533"N	103°48'30 706"W	0 00	
10975 00†	90 906	272 167	7705 87	3427 10	129 60	-3424 65	703366 57	477975 42	32°18'46 575"N	103°48'31 870"W	0 00	
11075.00†	90.906	272.167	7704.29	3527.08	133.38	-3524.56	703266.66	477979.20	32°18'46.617"N	103°48'33.034"W	0.00	
11175 00†	90 906	272 167	7702 71	3627 07	137 16	-3624 48	703166 75	477982 98	32°18'46 659"N	103°48'34 198"W	0 00	
11275 00†	90 906	272 167	7701 13	3727 06	140 94	-3724 39	703066 84	477986 76	32°18'46 701"N	103°48'35 362"W	0 00	
11375 00†	90.906	272 167	7699.55	3827.05	144 72	-3824 31	702966 93	477990 54	32°18'46 744"N	103°48'36 526"W	0 00	
11475 00†	90 906	272 167	7697 96	3927 03	148 50	-3924 23	702867 02	477994 32	32°18'46 786"N	103°48'37 690"W	0 00	
11575.00†	90.906	272.167	7696.38	4027.02	152.28	-4024.14	702767.11	477998.10	32°18'46.828"N	103°48'38.854"W	0.00	
11675 00†	90 906	272 167	7694 80	4127 01	156 07	-4124 06	702667 20	478001 88	32°18'46 870"N	103°48'40 018"W	0 00	
11775 00†	90 906	272 167	7693 22	4227 00	159 85	-4223 97	702567 29	478005 66	32°18'46 913"N	103°48'41 182"W	0 00	
11875 00†	90 906	272 167	7691 64	4326 98	163 63	-4323 89	702467 38	478009 44	32°18'46 955"N	103°48'42 346"W	0 00	
11975 00†	90 906	272 167	7690 06	4426 97	167 41	-4423 81	702367 47	478013 23	32°18'46 997"N	103°48'43 510"W	0 00	
12075.00†	90.906	272.167	7688.48	4526.96	171 19	-4523.72	702267.56	478017.01	32°18'47 039"N	103°48'44.674"W	0.00	
12175 00†	90 906	272 167	7686 89	4626 95	174 97	-4623 64	702167 65	478020 79	32°18'47 082"N	103°48'45 838"W	0 00	
12275 00†	90 906	272 167	7685.31	4726 93	178 75	-4723 55	702067 74	478024 57	32°18'47 124"N	103°48'47 002"W	0 00	
12375 00†	90 906	272 167	7683 73	4826 92	182 53	-4823 47	701967 83	478028 35	32°18'47 166"N	103°48'48 166"W	0 00	
12475 00†	90 906	272 167	7682 15	4926 91	186 31	-4923 38	701867 92	478032 13	32°18'47 208"N	103°48'49 330"W	0 00	
12575.00†	90.906	272.167	7680.57	5026.90	190.10	-5023.30	701768.01	478035.91	32°18'47.250"N	103°48'50.494"W	0.00	

Planned Wellpath Report

Prelim_2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 120H SHL
Area	Eddy County, NM	Well	No. 120H
Field	JRU Project	Wellbore	No. 120H PWB
Facility	JRU No. 120H		

WELLPATH DATA (94 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
12675.00†	90.906	272.167	7678.99	5126.88	193.88	-5123.22	701668.10	478039.69	32°18'47.293"N	103°48'51.658"W	0.00	
12775.00†	90.906	272.167	7677.41	5226.87	197.66	-5223.13	701568.19	478043.47	32°18'47.335"N	103°48'52.822"W	0.00	
12875.00†	90.906	272.167	7675.82	5326.86	201.44	-5323.05	701468.28	478047.25	32°18'47.377"N	103°48'53.986"W	0.00	
12975.00†	90.906	272.167	7674.24	5426.85	205.22	-5422.96	701368.37	478051.03	32°18'47.419"N	103°48'55.150"W	0.00	
13075.00†	90.906	272.167	7672.66	5526.83	209.00	-5522.88	701268.46	478054.81	32°18'47.461"N	103°48'56.314"W	0.00	
13175.00†	90.906	272.167	7671.08	5626.82	212.78	-5622.80	701168.55	478058.60	32°18'47.504"N	103°48'57.478"W	0.00	
13275.00†	90.906	272.167	7669.50	5726.81	216.56	-5722.71	701068.64	478062.38	32°18'47.546"N	103°48'58.642"W	0.00	
13375.00†	90.906	272.167	7667.92	5826.80	220.34	-5822.63	700968.73	478066.16	32°18'47.588"N	103°48'59.806"W	0.00	
13475.00†	90.906	272.167	7666.34	5926.78	224.13	-5922.54	700868.82	478069.94	32°18'47.630"N	103°49'00.970"W	0.00	
13575.00†	90.906	272.167	7664.75	6026.77	227.91	-6022.46	700768.91	478073.72	32°18'47.672"N	103°49'02.134"W	0.00	
13597.06†	90.906	272.167	7664.41	6048.83	228.74	-6044.50	700746.88	478074.55	32°18'47.682"N	103°49'02.391"W	0.00	
13675.00†	90.906	272.167	7663.17	6126.76	231.69	-6122.38	700669.00	478077.50	32°18'47.714"N	103°49'03.298"W	0.00	
13775.00†	90.906	272.167	7661.59	6226.75	235.47	-6222.29	700569.09	478081.28	32°18'47.757"N	103°49'04.462"W	0.00	
13875.00†	90.906	272.167	7660.01	6326.73	239.25	-6322.21	700469.18	478085.06	32°18'47.799"N	103°49'05.626"W	0.00	
13975.00†	90.906	272.167	7658.43	6426.72	243.03	-6422.12	700369.27	478088.84	32°18'47.841"N	103°49'06.790"W	0.00	
14075.00†	90.906	272.167	7656.85	6526.71	246.81	-6522.04	700269.36	478092.62	32°18'47.883"N	103°49'07.954"W	0.00	
14175.00†	90.906	272.167	7655.27	6626.70	250.59	-6621.96	700169.46	478096.40	32°18'47.925"N	103°49'09.118"W	0.00	
14275.00†	90.906	272.167	7653.68	6726.68	254.37	-6721.87	700069.55	478100.19	32°18'47.967"N	103°49'10.282"W	0.00	
14375.00†	90.906	272.167	7652.10	6826.67	258.15	-6821.79	699969.64	478103.97	32°18'48.010"N	103°49'11.446"W	0.00	
14475.00†	90.906	272.167	7650.52	6926.66	261.94	-6921.70	699869.73	478107.75	32°18'48.052"N	103°49'12.610"W	0.00	
14575.00†	90.906	272.167	7648.94	7026.65	265.72	-7021.62	699769.82	478111.53	32°18'48.094"N	103°49'13.774"W	0.00	
14675.00†	90.906	272.167	7647.36	7126.63	269.50	-7121.54	699669.91	478115.31	32°18'48.136"N	103°49'14.938"W	0.00	
14775.00†	90.906	272.167	7645.78	7226.62	273.28	-7221.45	699570.00	478119.09	32°18'48.178"N	103°49'16.102"W	0.00	
14875.00†	90.906	272.167	7644.20	7326.61	277.06	-7321.37	699470.09	478122.87	32°18'48.220"N	103°49'17.266"W	0.00	
14975.00†	90.906	272.167	7642.61	7426.60	280.84	-7421.28	699370.18	478126.65	32°18'48.262"N	103°49'18.430"W	0.00	
15075.00†	90.906	272.167	7641.03	7526.58	284.62	-7521.20	699270.27	478130.43	32°18'48.305"N	103°49'19.594"W	0.00	
15175.00†	90.906	272.167	7639.45	7626.57	288.40	-7621.12	699170.36	478134.21	32°18'48.347"N	103°49'20.758"W	0.00	
15275.00†	90.906	272.167	7637.87	7726.56	292.18	-7721.03	699070.45	478137.99	32°18'48.389"N	103°49'21.922"W	0.00	
15375.00†	90.906	272.167	7636.29	7826.55	295.97	-7820.95	698970.54	478141.77	32°18'48.431"N	103°49'23.086"W	0.00	
15475.00†	90.906	272.167	7634.71	7926.53	299.75	-7920.86	698870.63	478145.56	32°18'48.473"N	103°49'24.250"W	0.00	

Planned Wellpath Report

Prelim_2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No. 120H SHL**
Area	**Eddy County, NM**	Well	**No. 120H**
Field	**JRU Project**	Wellbore	**No. 120H PWB**
Facility	**JRU No. 120H**		

WELLPATH DATA (94 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
15575 00†	90 906	272 167	7633 12	8026 52	303 53	-8020 78	698770 72	478149 34	32°18'48 515"N	103°49'25 414"W	0 00	
15675 00†	90 906	272 167	7631 54	8126 51	307 31	-8120 70	698670 81	478153 12	32°18'48 557"N	103°49'26 578"W	0 00	
15775 00†	90 906	272 167	7629 96	8226 50	311 09	-8220 61	698570 90	478156 90	32°18'48 599"N	103°49'27 742"W	0 00	
15835 83	90 906	272 167	7629 00[1]	8287 32	313 39	-8281 39	698510 12	478159 20	32°18'48 625"N	103°49'28 450"W	0 00	No 120H PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 120H PBHL	15835 83	7629 00	313 39	-8281 39	**698510.12**	**478159.20**	32°18'48 625"N	103°49'28 450"W	point

SURVEY PROGRAM Ref Wellbore: No. 120H PWB Ref Wellpath: Prelim_2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	15835 83	NaviTrak (Standard)		No 120H PWB

BOPCO, L.P
James Ranch Unit #120H
Sec 8, T23S-R31E
Eddy County, NM

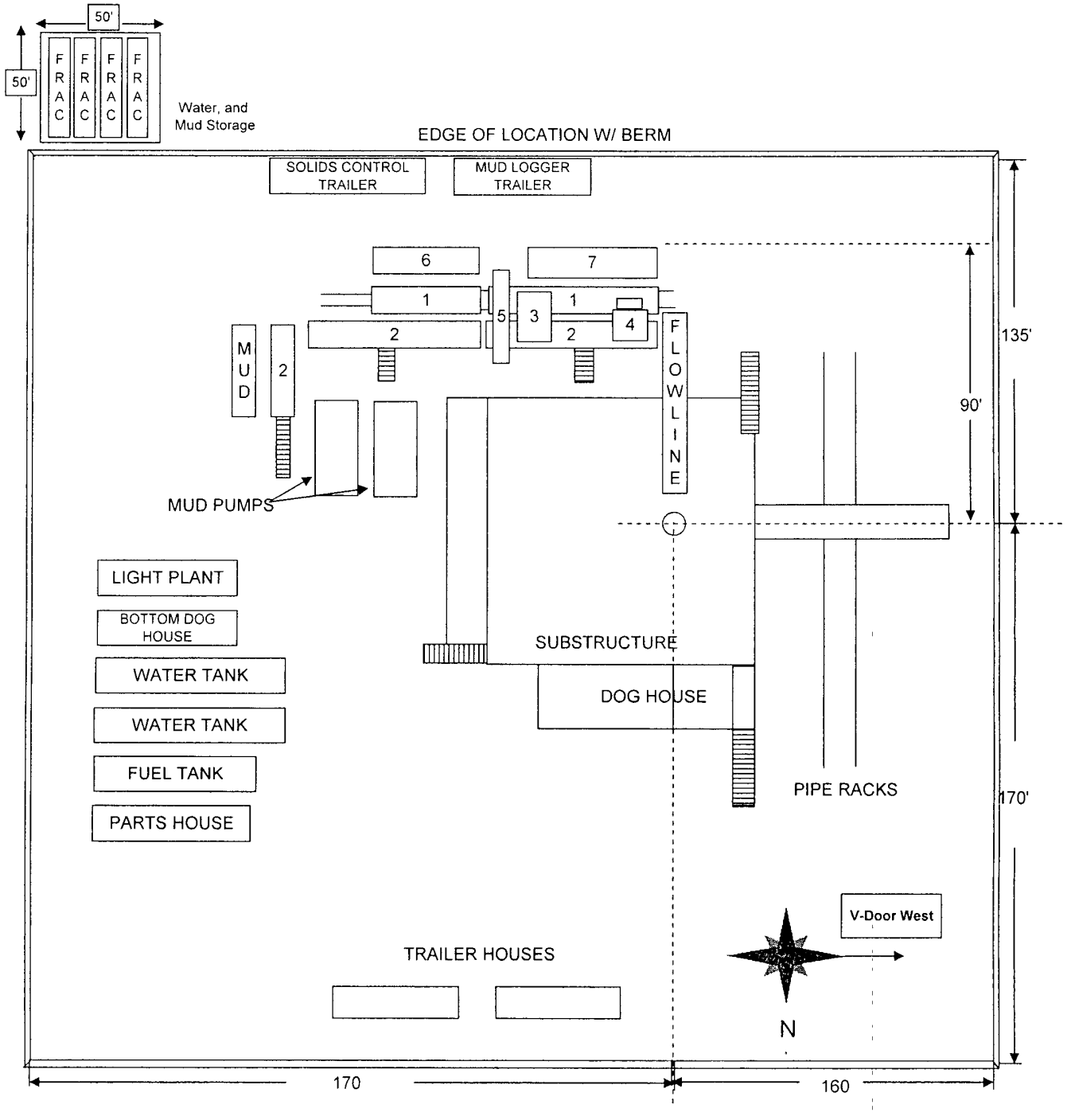
Exhibit "D"

McVay Rig #5

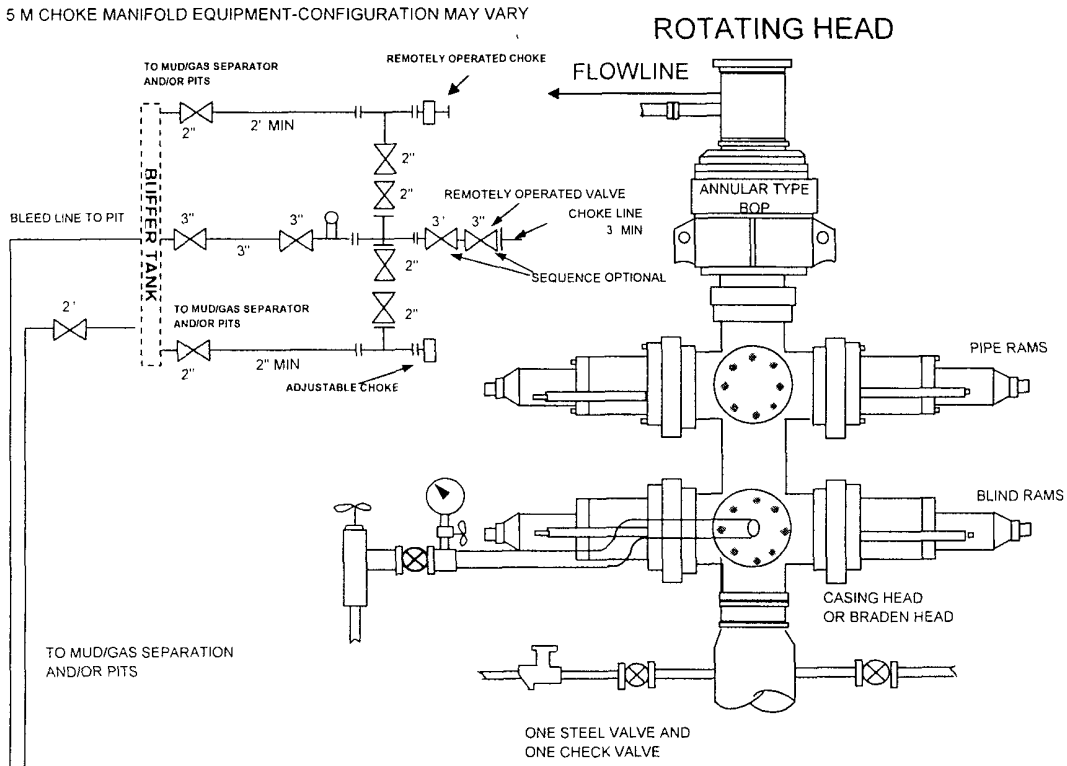
RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

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



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



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

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

DIAGRAM 2

TO STEEL MUD TANKS

BLEED LINE TO STEEL PIT (NOT CONNECTED TO BUFFER TANK

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: James Ranch Unit #120H
LEGAL DESCRIPTION - SURFACE 290' FSL, 1990' FEL, Section 8, T23S, R31E, Eddy County, NM
BHL 660' FSL, 330' FWL, Section 7, 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 Twin Wells, go east 0 1 miles to lease road. On lease road go northeast 1 1 miles to lease road, on lease road go west 0 1 miles to proposed location

C) Existing Road Maintenance or Improvement Plan

See Exhibit "B"

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location

Existing lease road will be used (up-graded if necessary)

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

A) Existing production facilities within one mile owned or controlled by lessee/operator are located at James Ranch Unit #55 Battery

B) New Facilities in the Event of Production

New production facilities will not be installed at new location Additional separators and heater/treaters will be added as needed at the James Ranch Unit #55 Battery (located in SENW quarter of Sec 17, T23S-R31E) A 2-7/8" steel flow line carrying oil, water, and gas will be laid on top of ground from James Ranch Unit #120H to James Ranch Unit #55 Battery following existing roads (See attached Exhibit E) Electric lines will also follow existing roads as shown in 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

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 West side of location construction will be limited to avoid pipelines (See Exhibit "B").

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

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

None in the immediate vicinity.

H) Historical Sites

None observed

I) Archeological Resources

This project is entirely located in the MOA area A fee of $1339 is submitted with this application A separate fee in the amount of $1286 covering flowlines and electric power lines is also submitted with this application Any location or construction conflicts will be resolved before construction begins

J) Surface Ownership

The well site is on federal 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

(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

Date

Gary Gerhard

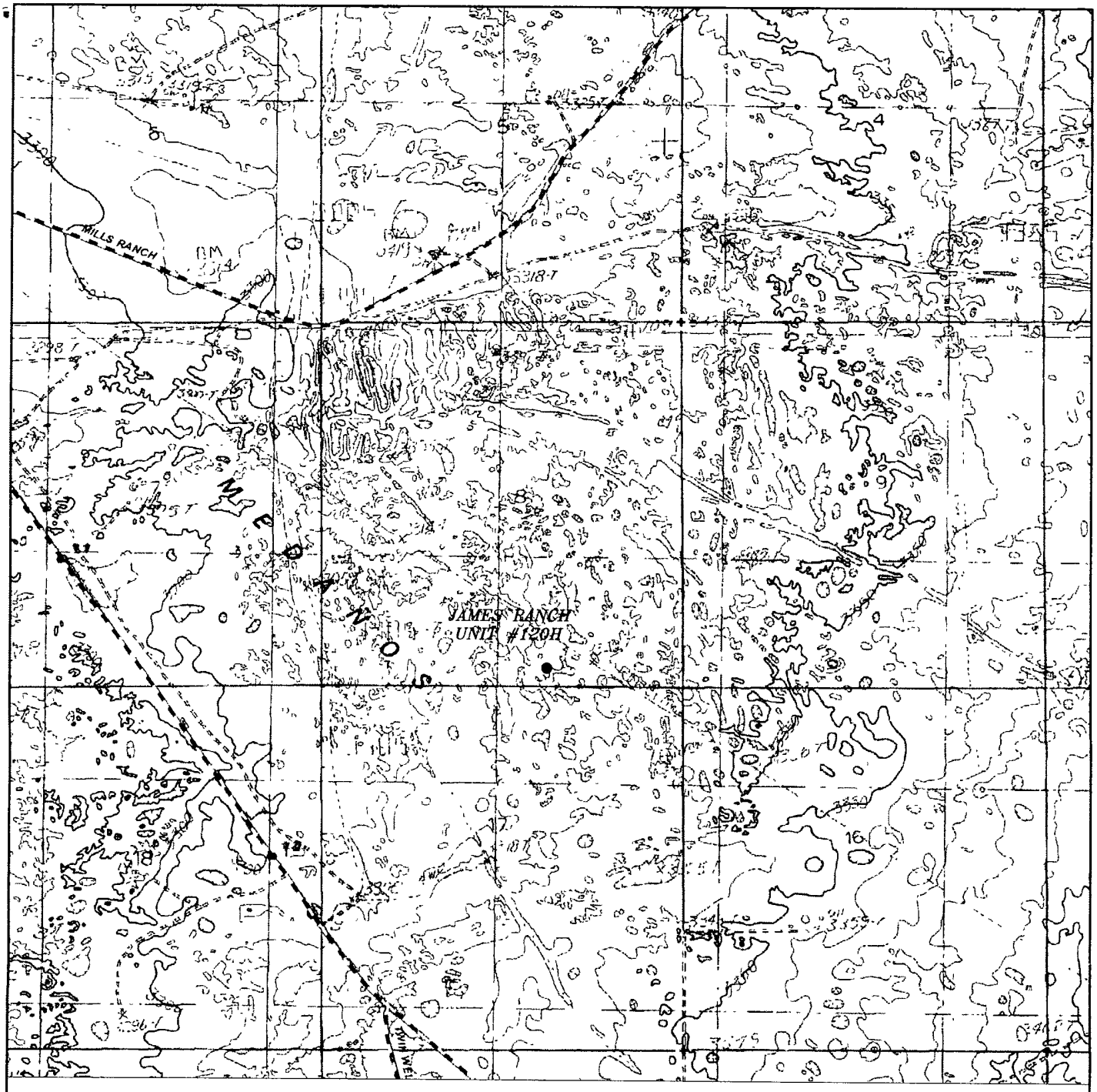
GEG/mac

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 it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved This statement is subject to the provisions of 18 U S C 1001 for the filing of a false statement.

3/22/10
Date

Gary Gerhard
Gary Gerhard



JAMES RANCH UNIT #120H
Located 290' FSL and 1990' FEL
Section 8, Township 23 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

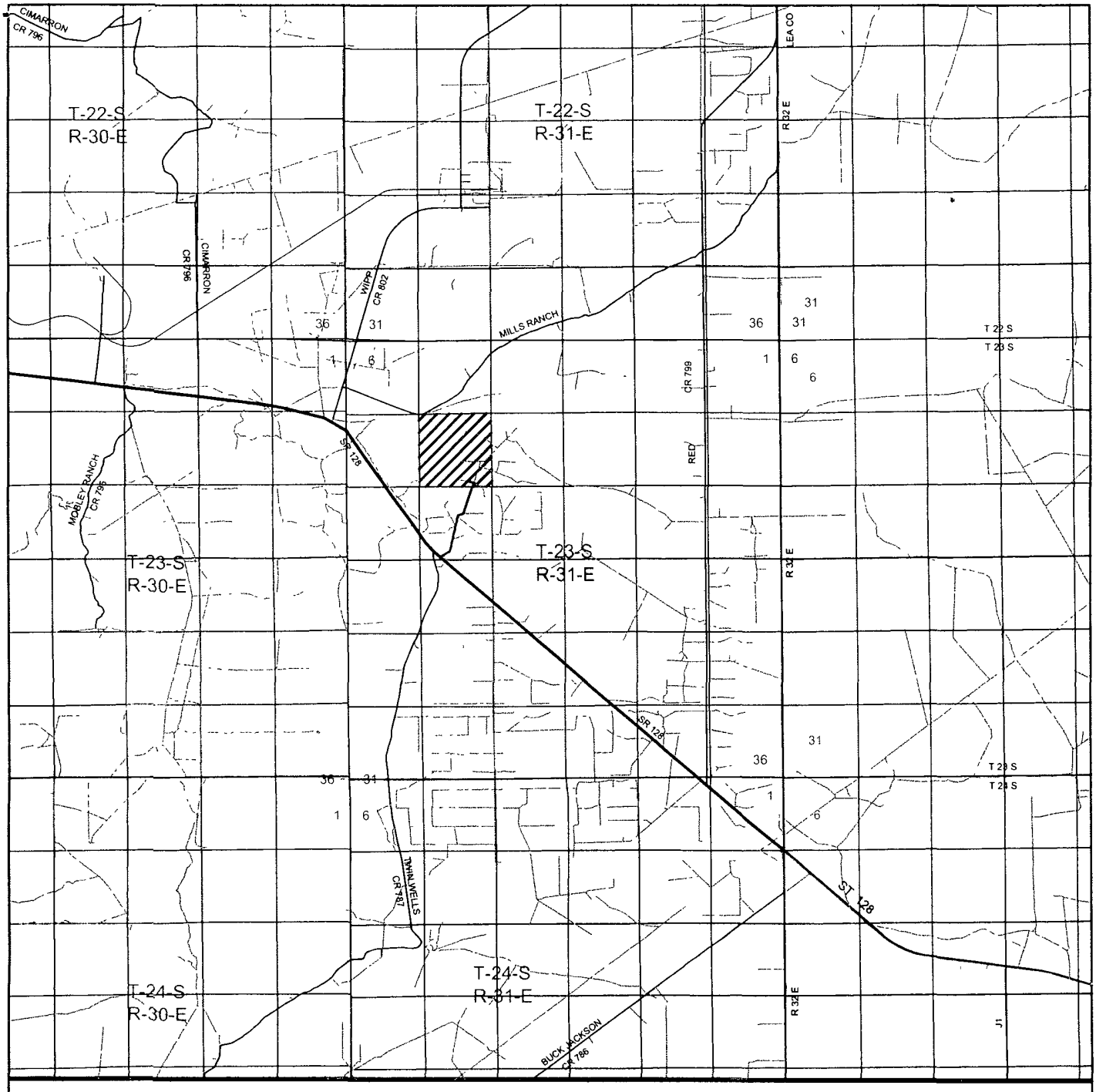
basin surveys
focused on excellence in the oilfield

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

W O Number	JMS 22339
Survey Date	02-26-2010
Scale	1" = 2000'
Date	03-02-2010

N

BOPCO, L.P.



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basinsurveys.com

W O Number	JMS 22339
Survey Date	02-26-2010
Scale	1" = 2 Miles
Date	03-02-2010

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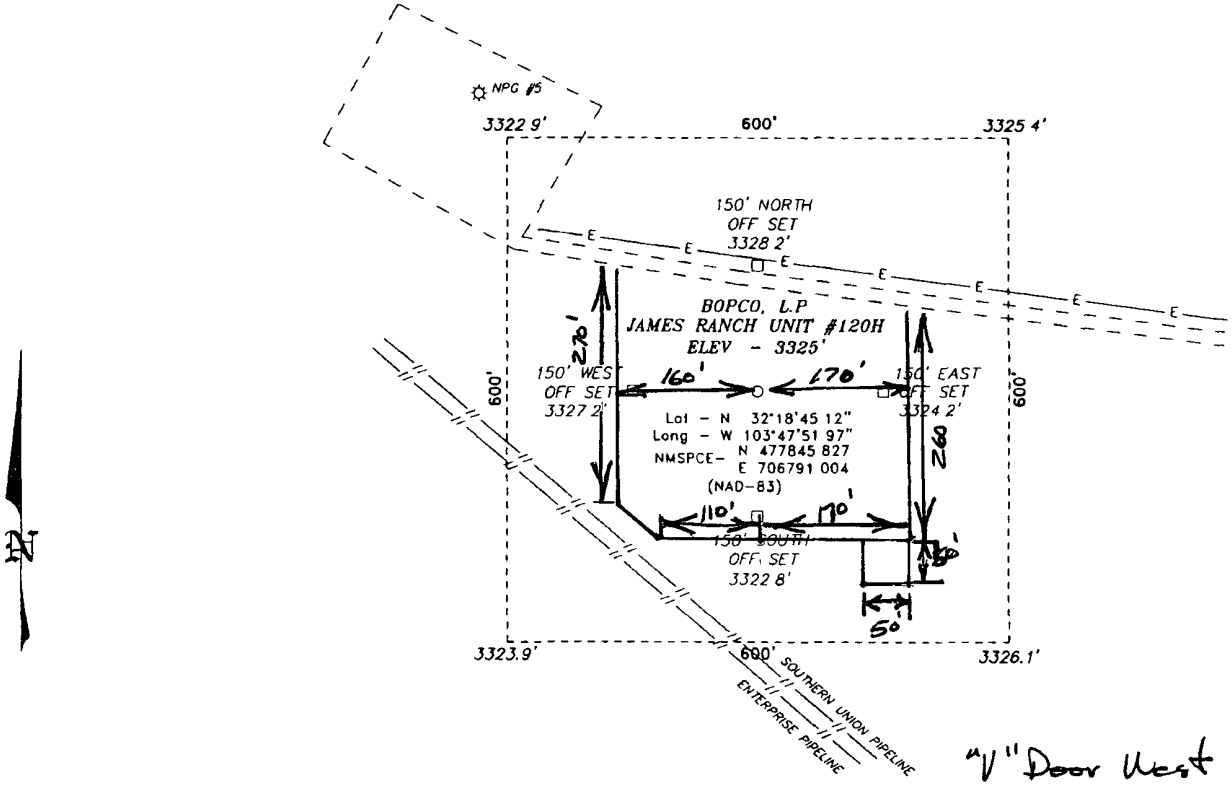
BOPCO, L.P.

SECTION 8, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



"V" Door West
Solids Equip South

4/19/10

Received per my request - 4-19-10 - Place in APD Packet.
RWR

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

Directions to Location

FROM THE JUNCTION OF STATE HWY 128 AND TWIN WELLS, GO EAST 0.1 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTHEAST 1.1 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0.1 MILES TO PROPOSED LOCATION

BOPCO, L.P.

REF JAMES RANCH UNIT #120H / WELL PAD TOPO

THE JAMES RANCH UNIT #120H LOCATED 290' FROM THE SOUTH LINE AND 1990' FROM THE EAST LINE OF SECTION 8, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

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

W.O. Number 22339	Drawn By J. SMALL		
Date 03-02-2010	Disk: JMS 22339	Survey Date: 02-26-2010	Sheet 1 of 1 Sheets

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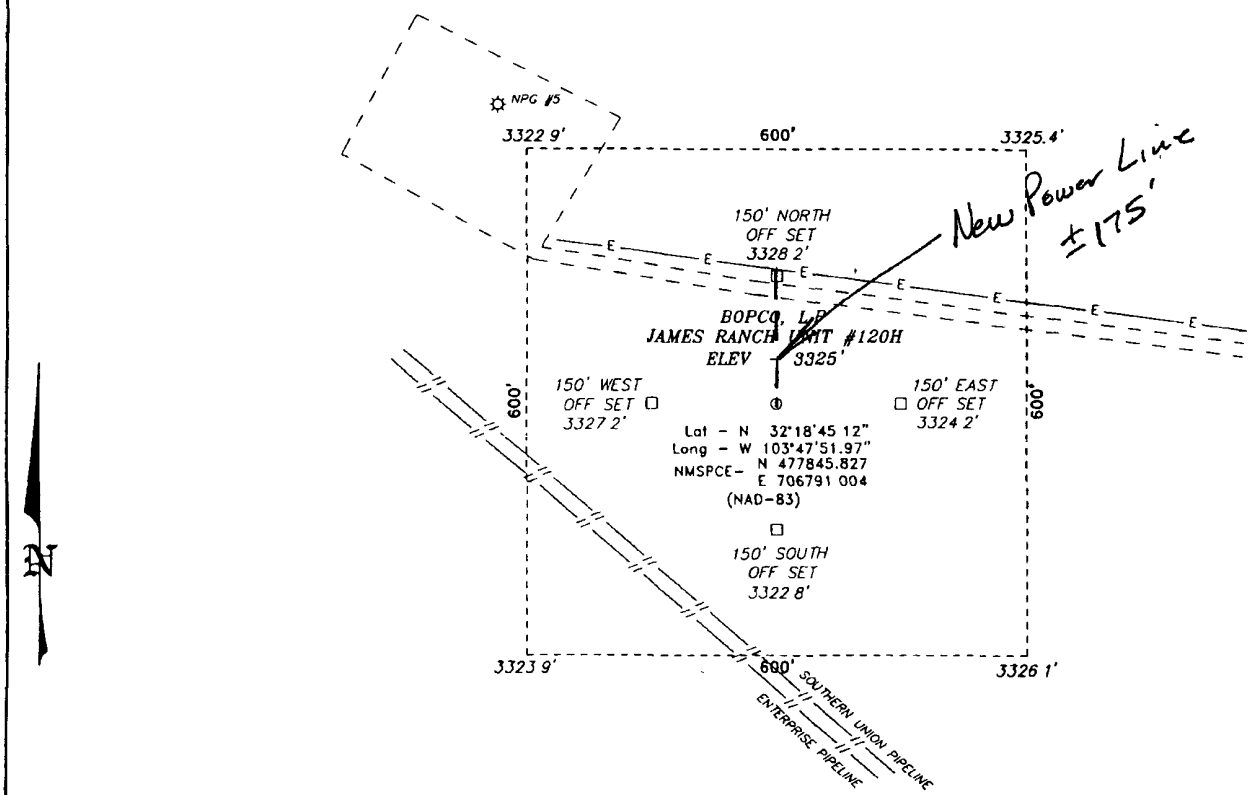
SECTION 8, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location

FROM THE JUNCTION OF STATE HWY 128 AND TWIN WELLS GO EAST 0 1 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTHEAST 1 1 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0 1 MILES TO PROPOSED LOCATION

BOPCO, L.P.

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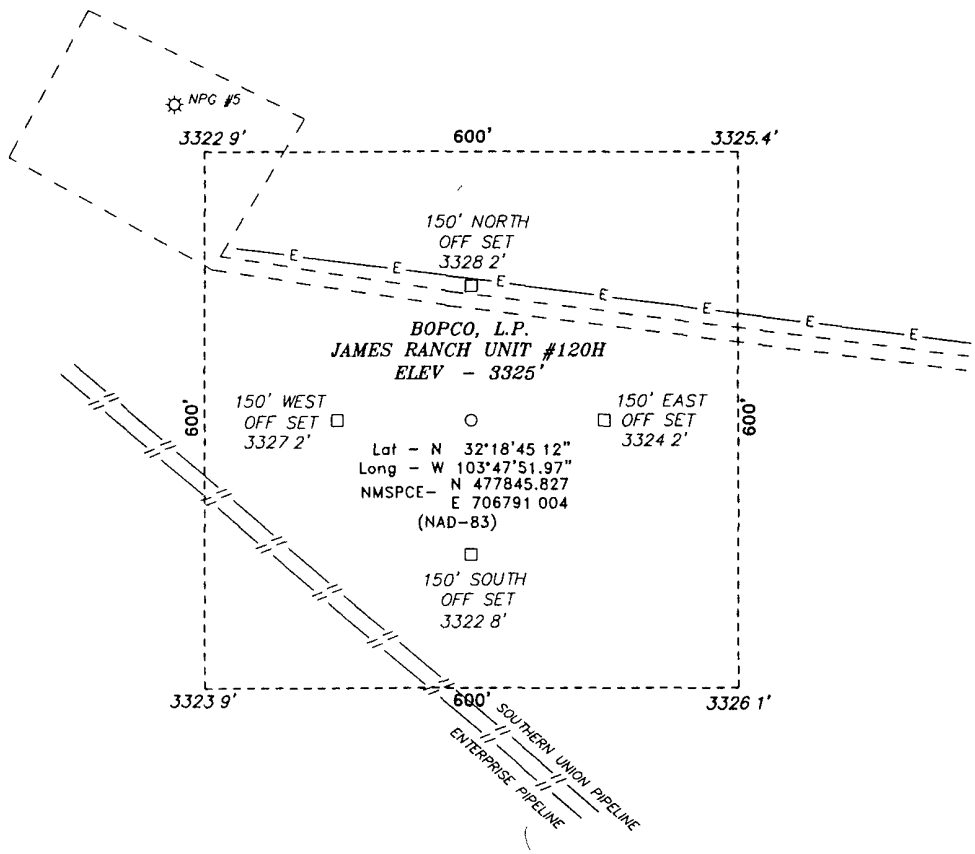
BASIN SURVEYS P O BOX 1786 – HOBBS, NEW MEXICO

W O Number 22339	Drawn By J SMALL		
Date 03-02-2010	Disk JMS 22339	Survey Date 02-26-2010	Sheet 1 of 1 Sheets

SECTION 8, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



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200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location

FROM THE JUNCTION OF STATE HWY 128 AND TWIN WELLS, GO EAST 0 1 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTHEAST 1 1 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0.1 MILES TO PROPOSED LOCATION

BOPCO, L.P.

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FROM THE SOUTH LINE AND 1990' FROM THE EAST LINE OF

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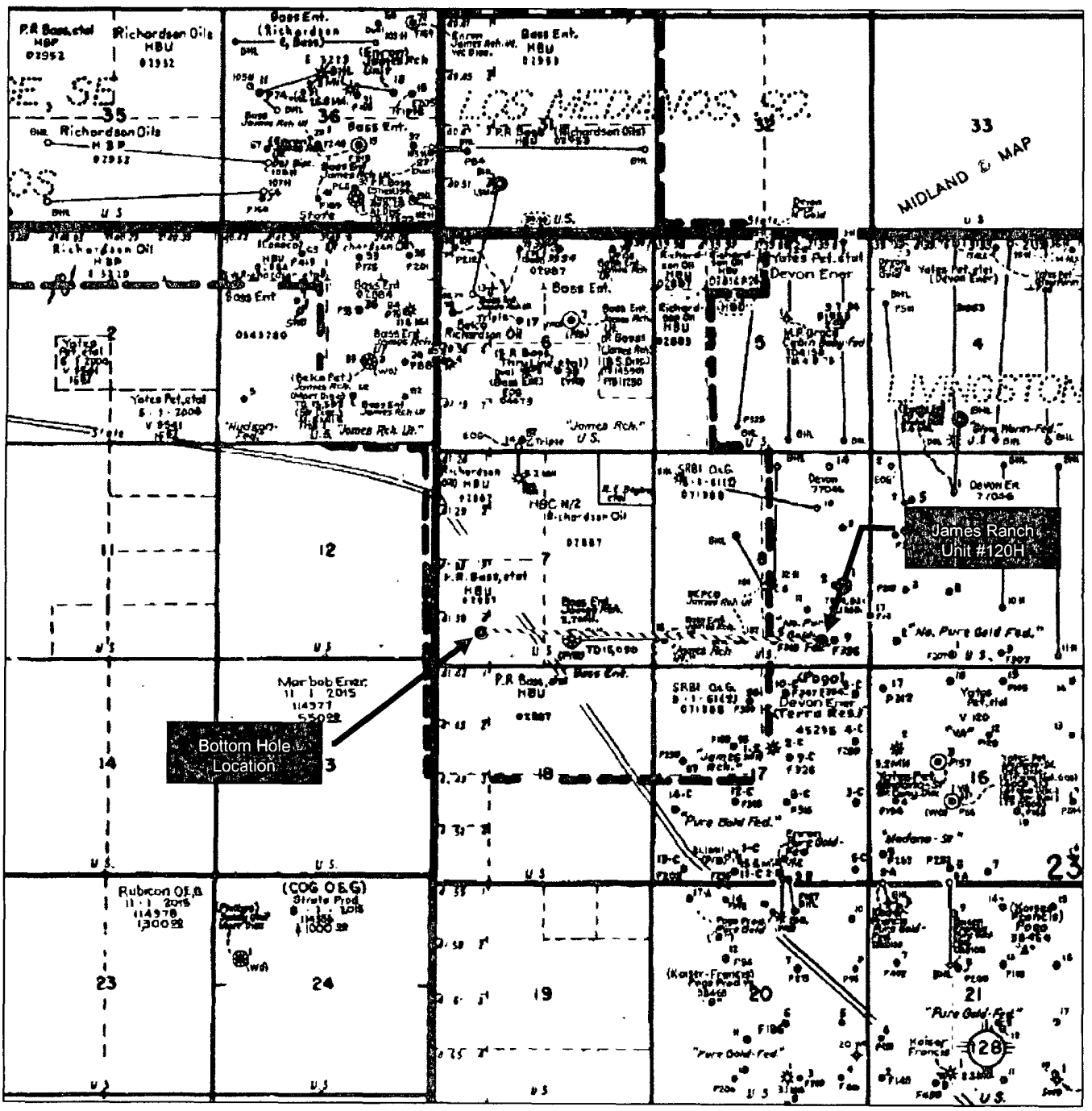
N.M.P.M., EDDY COUNTY, NEW MEXICO

BASIN SURVEYS P O BOX 1786 – HOBBS, NEW MEXICO

W O Number 22339	Drawn By J. SMALL		
Date 03-02-2010	Disk: JMS 22339	Survey Date 02-26-2010	Sheet 1 of 1 Sheets

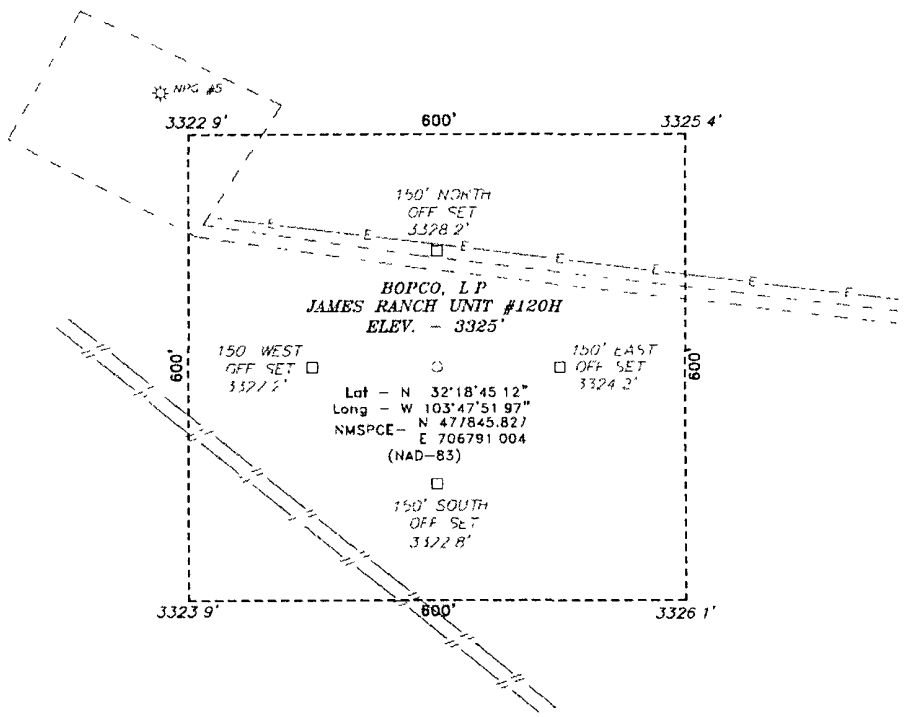
James Ranch Unit #120H

Exhibit "A"



James Ranch Unit #120H
Exhibit "B"

SECTION 8, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



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SCALE: 1" = 200'

Directions to Location

FROM THE JUNCTION OF STATE HWY 128 AND TWIN WELLS, GO EAST 0.1 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTHEAST 1.1 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0.1 MILES TO PROPOSED LOCATION

BOPCO, L.P.

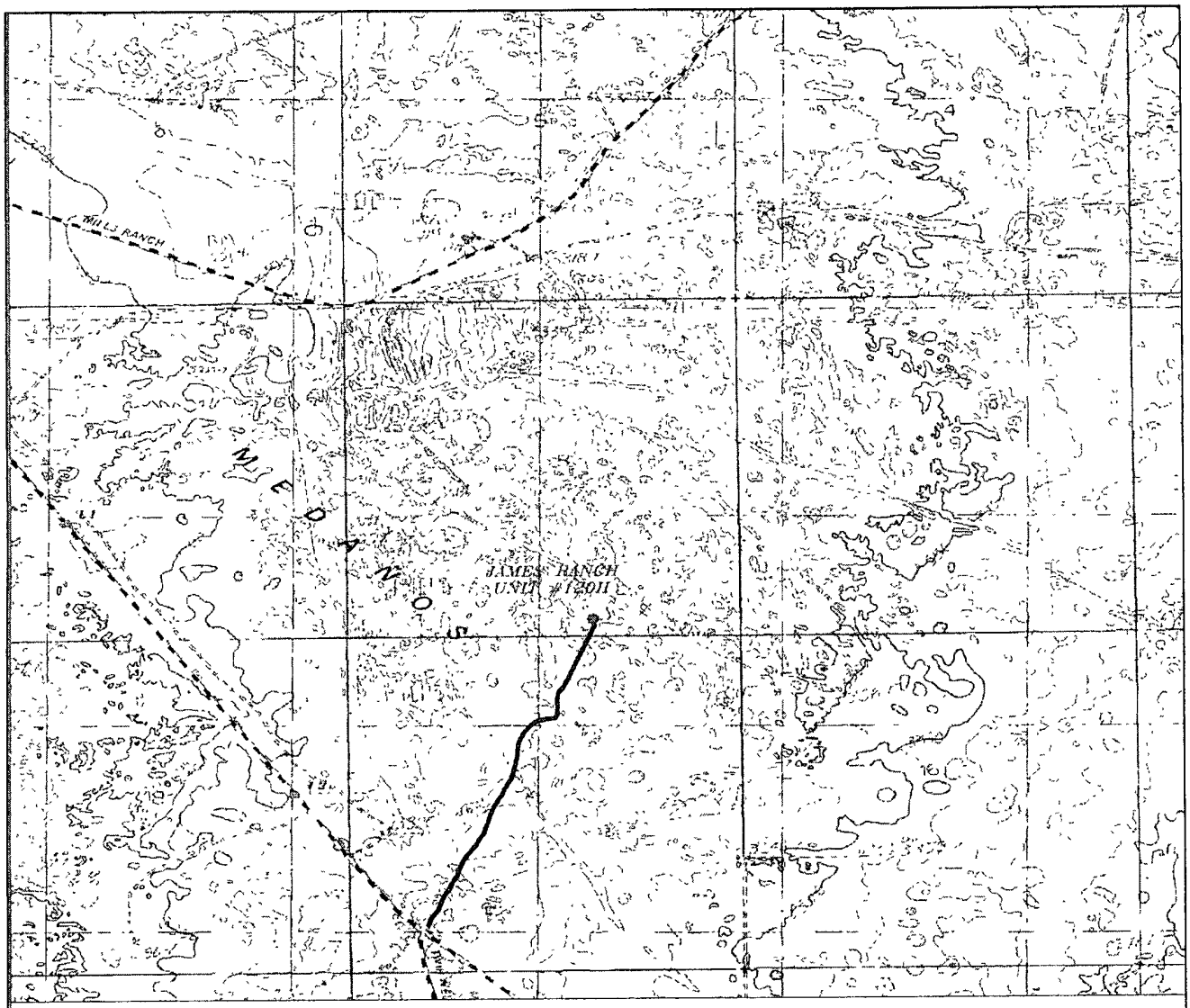
REF JAMES RANCH UNIT #120H / WELL PAD TOPO

THE JAMES RANCH UNIT #120H LOCATED 290' FROM THE SOUTH LINE AND 1990' FROM THE EAST LINE OF SECTION 8, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number 22339	Drawn By J. SMALL		
Date 03-02-2010	Disk JMS 22339	Survey Date 02-26-2010	Sheet 1 of 1 Sheets

James Ranch Unit #120H
Exhibit "C"



JAMES RANCH UNIT #120H
Located 290' FSL and 1990' FEL
Section 8, Township 23 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

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(575) 393 7316 Office
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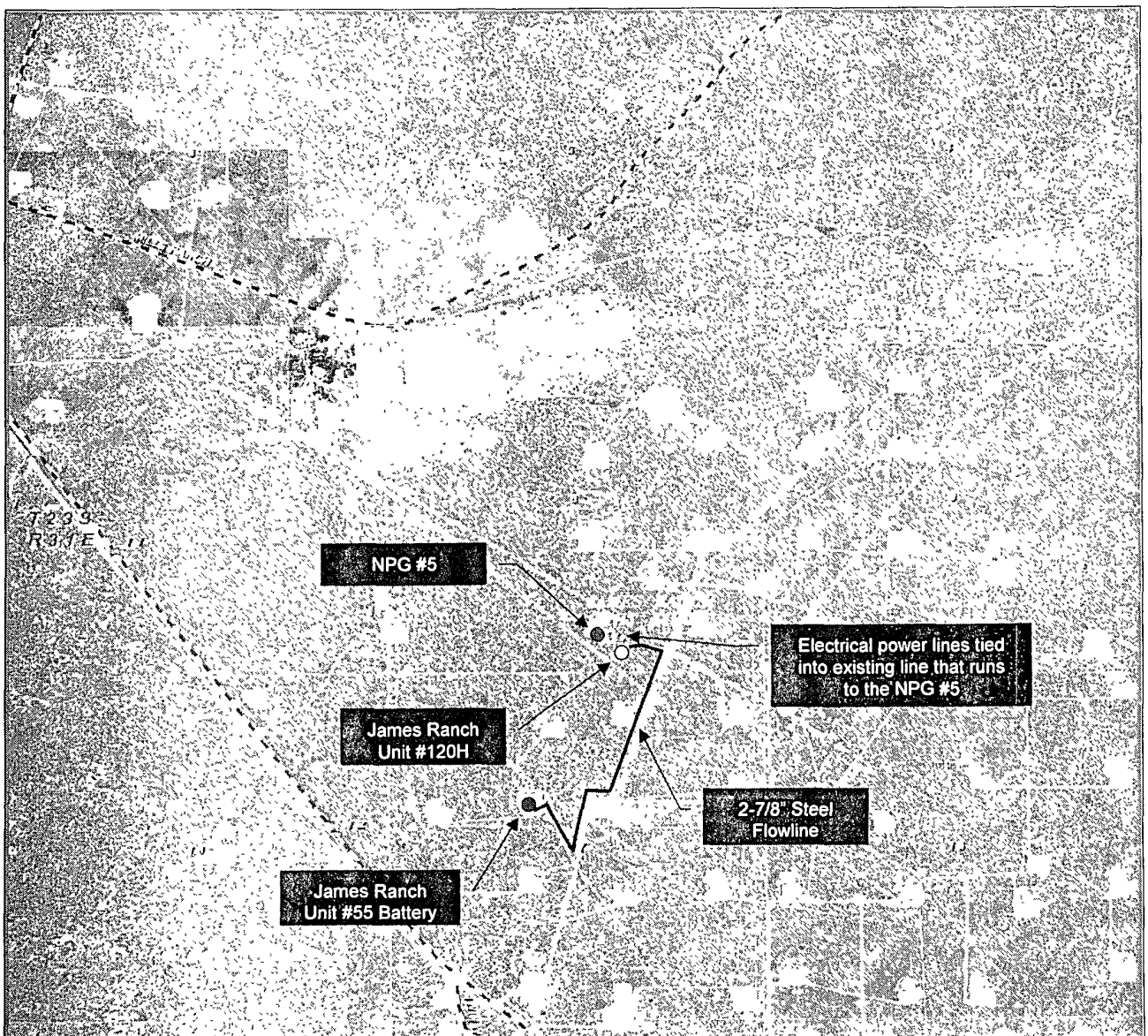
W.O. Number JMG 22339
Survey Date 02-26-2010
Scale 1" = 2000'
Date 03-02-2010

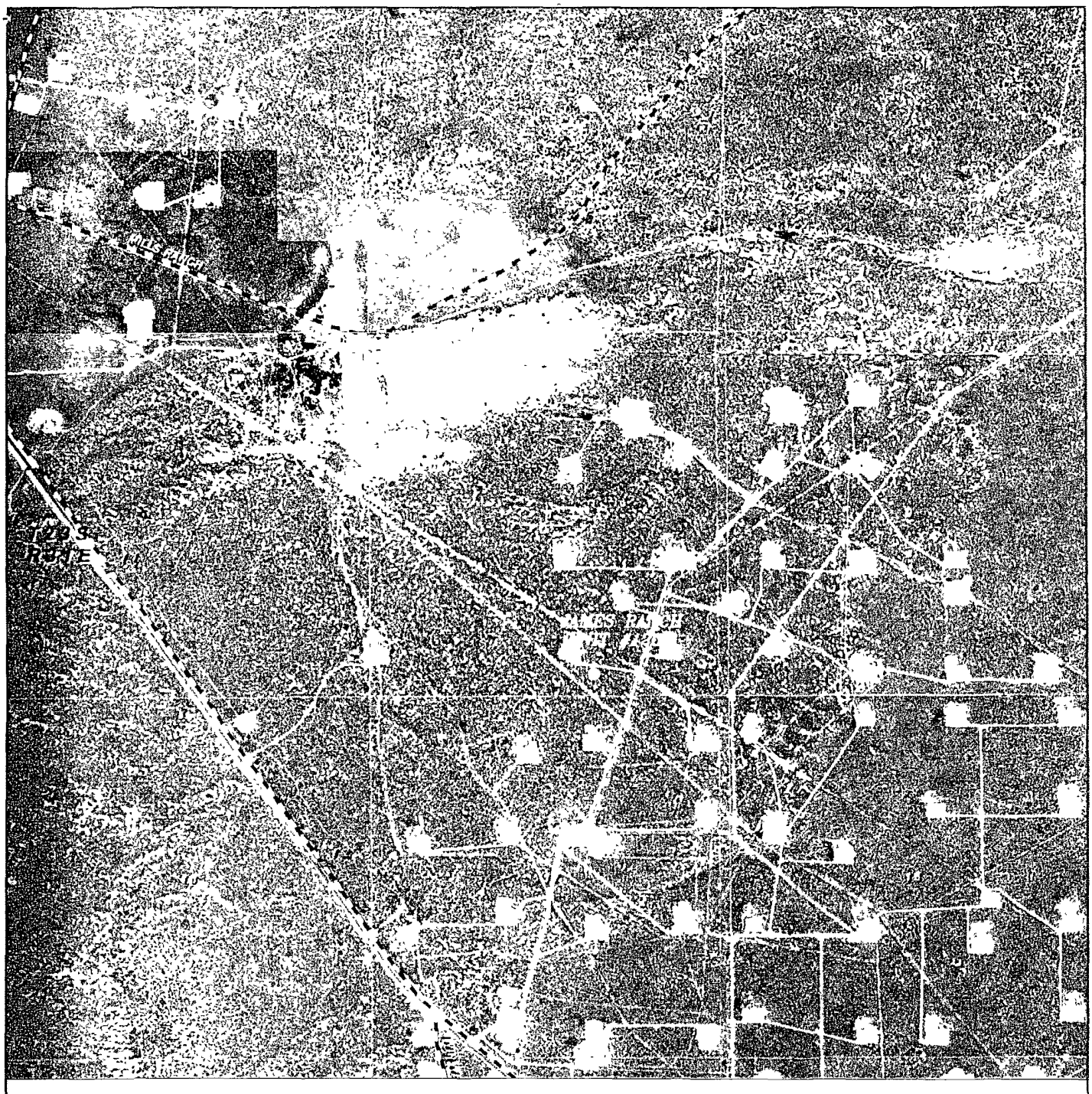
BOPCO, L.P.

James Ranch Unit #120H
Exhibit "E"



JAMES RANCH UNIT #120H
Located 290' FSL and 1990' FEL
Section 3, Township 23 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico

BOPCO, L.P.



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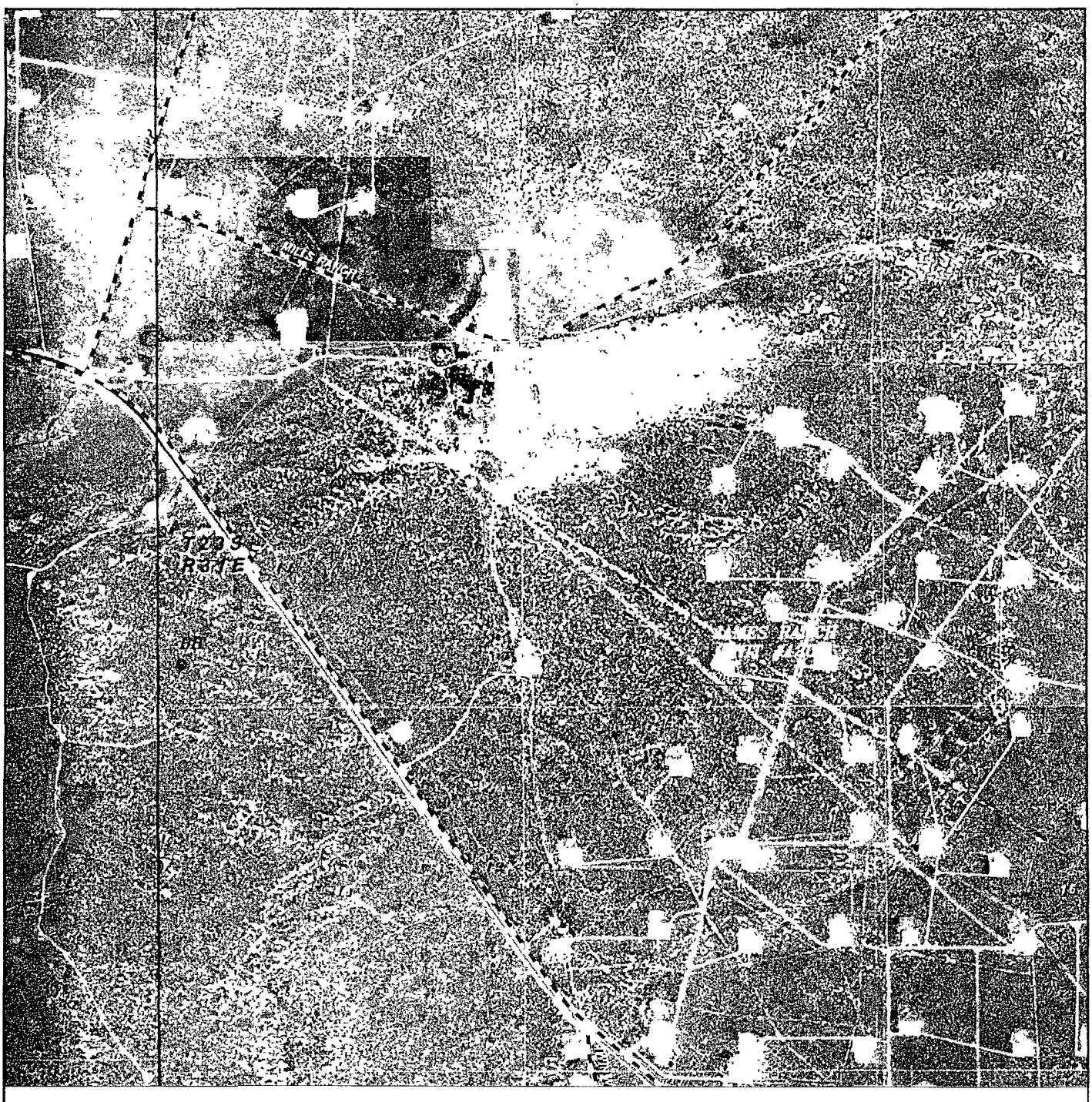
W O Number JMS 22333

Scale 1 = 2000'

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

N

BOPCO, L.P.



JAMES RANCH UNIT #120H
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basinsurveys.com

W.O. Number JMS 22339

Scale 1" = 2000'

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

N

BOPCO, L.P.

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO LP
LEASE NO.:	NM02887A
WELL NAME & NO.:	120H James Ranch Unit
SURFACE HOLE FOOTAGE:	290' FSL & 1990' FEL
BOTTOM HOLE FOOTAGE	660' FSL & 330' FWL
LOCATION:	Section 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

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.

I. 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.)

II. 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.

III. 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.

IV. SPECIAL REQUIREMENT(S)

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

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

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.

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

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

Commercial Well Determination
Well is outside of NMNM – 070965G participating area. A commercial well determination will need to be submitted.

V. 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 theCarlsbad 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 twelve (12) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

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

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

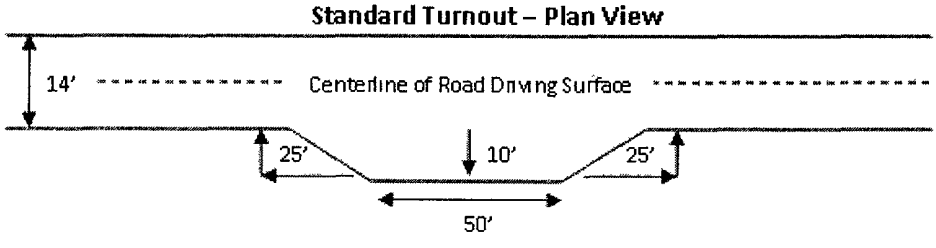
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

Crowning

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

Turnouts

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

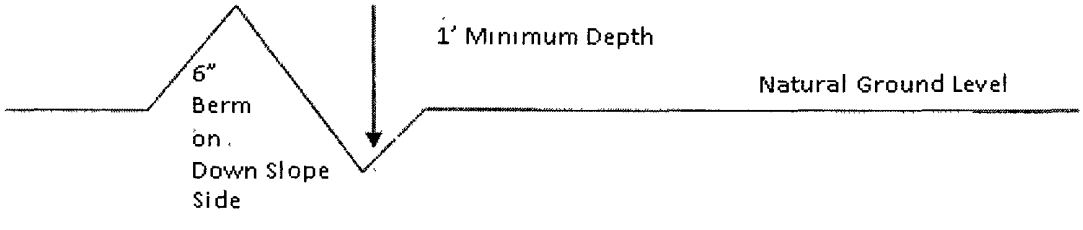


Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

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

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

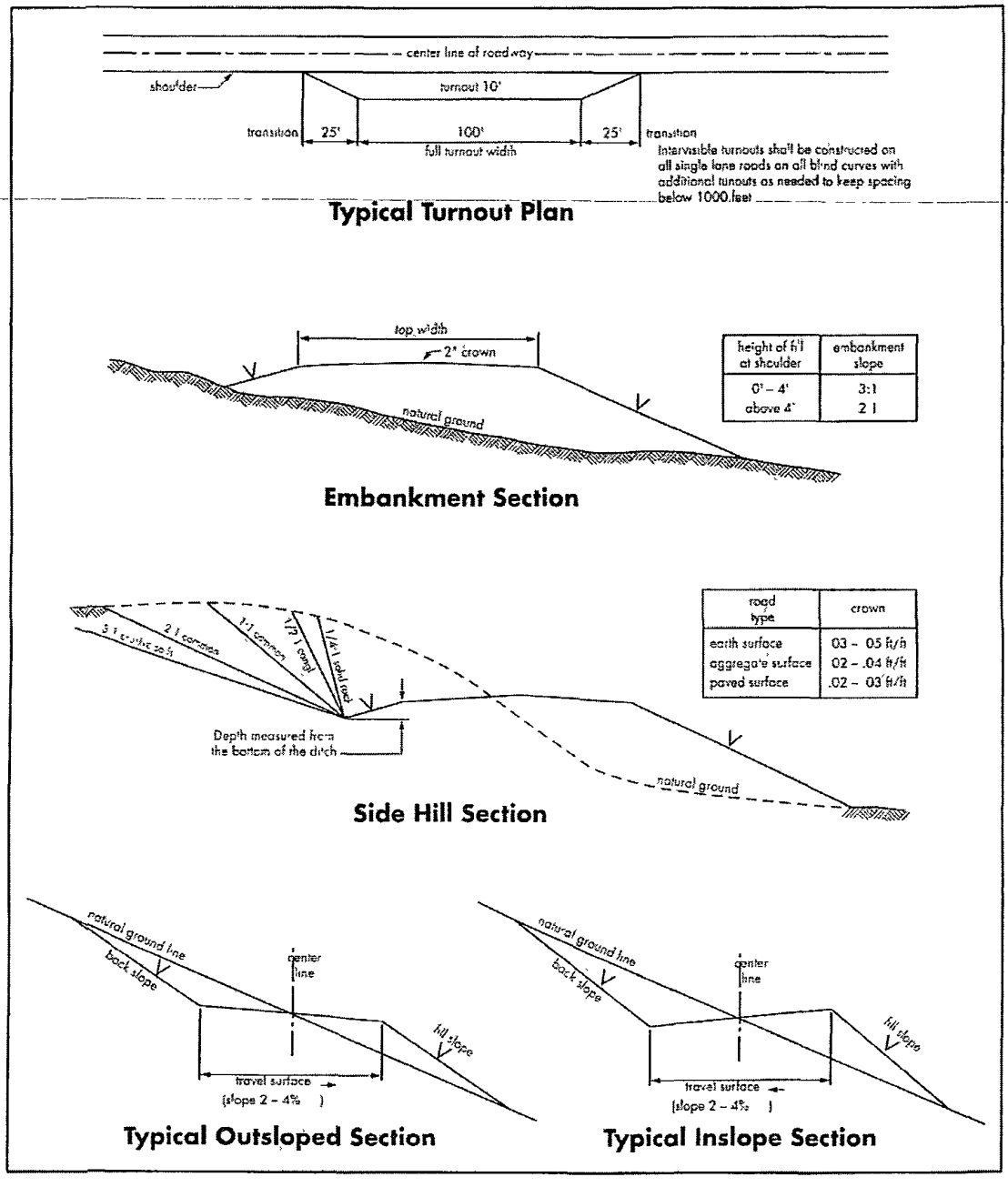
A gate shall be constructed and fastened securely to H-braces.

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

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

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VI. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. **Due to recent H2S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

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

B. CASING

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

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

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours

for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Secretary's Potash
Possible water and brine flows in the Salado and Castile 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 680 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

9-5/8" casing is to be kept fluid filled while running into hole.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which is to be set at approximately 4030 feet, is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

3. The minimum required fill of cement behind the **7** inch intermediate 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 potash.**

A LEASE LINE ISOLATION PACKER MUST BE SET A MINIMUM OF 350' INSIDE UNIT BOUNDARY TO PREVENT DRAINAGE FROM ADJACENT FEDERAL LEASE. OPERATOR MUST CONFIRM LOCATION OF PACKER AND SUBMIT DOCUMENTATION TO THE BLM CARLSBAD OFFICE.

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

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.

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VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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 of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

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 –

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.

VIII. INTERIM RECLAMATION

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

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

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for

production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture for LPC Sand/Shinnery Sites

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

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly

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

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

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

*Pounds of pure live seed:

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