JUN 1 0 2010

NMOCD ARTESIA

R-111-POTASH

AT5-10-431

Form 3160-3 (April 2004)		FORM APPR OMB No 100 Expires M		
UNITED STATI DEPARTMENT OF THE BUREAU OF LAND MA	INTERIOR		5 Lease Serial No S 02887, 071988	HL: LC 07198
APPLICATION FOR PERMIT TO	6 If Indian, Allotec o			
			7. If Light on CA Agreemen	t Name and Na
1a Type of work ✓ DRILL REEN	7 If Unit or CA Agreemen	nt, Name and No		
lb Type of Well Oil Well Gas Well Other	8 Lease Name and Well James Ranch Unit			
2 Name of Operator BOPCO, L. P.	(21,1)777		9 API Well No	38113.
3a Address P. O. Box 2760	3b Phone No (include area code)		10 Field and Pool, or Explo	oratory 5044
Midland, TX 79702	432-683-2277		Quahada Ridge SI	
4 Location of Well (Report location clearly and in accordance with	, ,	9027 <i>6</i> 7	11 Sec, TRM or Blk ar	d Survey or Area
At surface SENW, ULF, 2450' FNL, 1430' I At proposed prod zone 1980'FNL, 330'FWL, Sec 18-R233	FWL, Lat N32.304992, Lon W103. S-R31E,Lat N32.306250,Lon W103		Sec 17, T23S, R311	E, Mer NMP
14 Distance in miles and direction from nearest town or post office*			12 County or Parish	13 State
20 miles Northeast of Malaga, NM 15 Distance from proposed*	16 No of committees	17 Spage	Eddy County ng Unit dedicated to this well	NM
location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of acres in lease 4580.37	160	ng Omit dedicated to this wen	
18 Distance from proposed location*	19 Proposed Depth	20 BLM	BIA Bond No on file	
to nearest well, drilling, completed, applied for, on this lease, ft 70'	13,983' MD, 7603' (TVD)	СОВ	000050	
Elevations (Show whether DF, KDB, RT, GL, etc.) 3314' GL	22 Approximate date work will sta 12/15/2010	rt*	23 Estimated duration 30 days	
	24 Attachments			
The following, completed in accordance with the requirements of Ons	hore Oil and Gas Order No 1, shall be a	ttached to t	nis form	
 Well plat certified by a registered surveyor A Drilling Plan A Surface Use Plan (if the location is on National Forest Syste 	Item 20 above)	•	ons unless covered by an exis	ting bond on file (see
SUPO shall be filed with the appropriate Forest Service Office)		specific in:	formation and/or plans as ma	y be required by the
25 Signature annette Childre	Name (Printed/Typed) Annette Childers		Dat	<u> </u>
itle Regulatory Clerk				•
Approved by (Signature)	Name (Printed Typed)	TH	FRREU Da	5-25-10
FOR STATE DIRECTOR	Office NM ST	'ATE	OFFICE	
Application approval does not warrant or certify that the applicant h conduct operations thereon	olds legal or equitable title to those righ	nts in the su	bject lease which would entitl	
Conduct operations thereon Conditions of approval, if any, are attached	APPR	OVAL	FOR TWO YE	ARS
Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a States any false, fictitious or fraudulent statements or representations	as to any matter within its jurisdiction	willfully to	make to any department or ag	gency of the United
*(Instructions on page 2)	OCD CONDITION OF APPI Intent to drill ONLY CAN Location has been approved	VNOT pro	duce until the Non-Stan	dard

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FUR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED DISTRICT I 1625 N. French Dr , Hobbs, NM 88240 DISTRICT II

DISTRICT IV

State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised October 15, 2009

Submit one copy to appropriate District Office

1301 W. Grand Avenue, Artesia, NM 68210 DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

1220 S. St. Francis Dr., Santa Fe, NM 87505

260737

Santa Fe, New Mexico 87505

OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT API Number 50470 50443 30-015-38113 Quahada Ridge SE (Delaware) Well Number Property Code Property Name JAMES RANCH UNIT 124H 306407 Operator Name Elevation OGRID No. 3314 BOPCO, L.P.

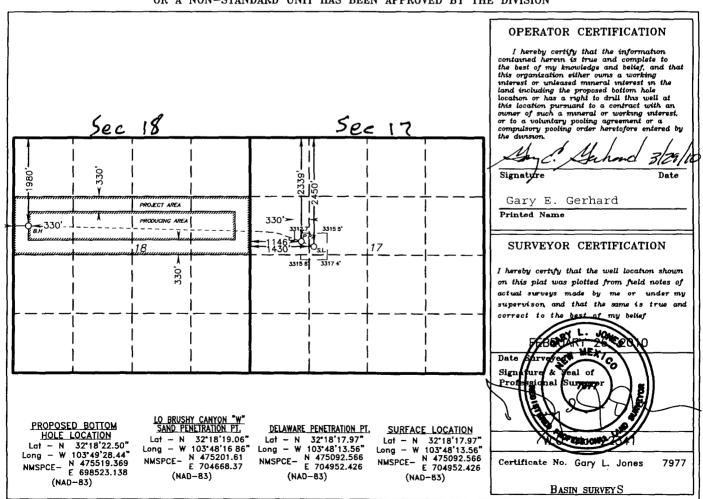
Surface Location

	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
ĺ	F	17	23 S	31 E	İ	2450	NORTH	1430	WEST	EDDY

Bottom Hole Location If Different From Surface

ſ	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	ME	18	23 S	31 E		1980	NORTH	330	WEST	EDDY
Ī	Dedicated Acres	Joint o	r Infill Co	nsolidation	Code Or	der No.				
	160	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



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

7" casing will be set at approximately 8940' 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 8940' 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 Surface location 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 Mail Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide)

EIGHT POINT DRILLING PROGRAM BOPCO, L.P.

NAME OF WELL: James Ranch Unit #124H

LEGAL DESCRIPTION - SURFACE: 2450' FNL, 1430' FWL, Section 17, T23S, R31E, Eddy County, NM BHL. 1980' FNL, 330' FWL, Section 18, 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 3333' (estimated)

GL 3314'

ESTIMATED							
	TOP FR	OM KB	ESTIMATED				
<u>FORMATION</u>	<u>TVD</u>	<u>MD</u>	SUB-SEA TOP	BEARING			
T/Rustler	358'	358'	+ 2975'	Barren			
T/Salt	694'	694'	+ 2639'	Barren			
B/Salt	3786'	3786'	- 453'	Barren			
T/Lamar Lime	4018'	4018'	- 685'	Barren			
T/Ramsey	4054'	4054'	- 721'	Oil/Gas			
T/Lower Cherry Canyon	6239'	6239'	- 2906'	Oil/Gas			
KOP (Kick Off Point)	7222'	7222'	- 3889'	N/A			
T/Brushy Canyon "U" Sand	7419'	7425'	- 4086'	Oıl/Gas			
Lwr Brushy Canyon "8A"	7602'	7661'	- 4269'	Oil/Gas			
Lwr Brushy Canyon "W" Sand	7668'	7796'	- 4335'	Oil/Gas			
EOC Target	7701'	7974'	- 4368'	Oil/Gas			
TD (end of lateral)	7603'	13,983'	- 4270'	Oil/Gas			

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	Hole Size	<u>PURPOSE</u>	CONDITION
20"	0' - 40'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, 8rd, ST&C	0' - 684'	17-1/2"	Surface	New
9-5/8", 40#, J-55, 8rd, LT&C	0' - 4038'	12-1/4"	Intermediate	New
7", 26#, N-80, 8rd, LT&C	0' - 8940'	8-3/4"	Production	New
4-1/2", 11.6#, N-80, 8rd, LT&C	8940' - 13,983'	6-1/8"	Production	New

CASING DESIGN SAFETY FACTORS:

TYPE	<u>TENSION</u>	<u>COLLAPSE</u>	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 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	<u>WEIGHT</u>	_FV	<u>PV</u>	<u>YP</u>	FL	<u>Ph</u>
0' - 684'	FW Spud Mud	8 5 - 9.2	38-70	NC	NC	NC	10 0
684' - 4,038'	Brine Water	9.8 – 10 2	28-30	NC	NC	NC	9 5 – 10 5
4,038' - 8,940'	FW/Gel	87-90	28-36	NC	NC	NC	9 5 – 10 0
8,940' - 13,983'	FW/Gel/Starch	87-90	28-36	NC	NC	<20	9 5 – 10 0

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

SUPOR

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 as part of completion procedure

C) CONVENTIONAL CORING

None anticipated

D)CEMENT

INTERVAL SURFACE:	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	<u>PPG</u>	FT ³ /SX
Lead 0 - 384' (100% excess Circ to surface)	310	384	Class "C" + 4% Extender + 2% CaCl ₂	9 15	13 50	1 74
Tail 384' - 684' (100% excess)	335	300	Class "C" + 2% CaCl ₂	6 35	14 80	1 34
INTERMEDIATE: Lead 0' - 3538' (100% excess Circ to surface)	1075	3538	35/65 Poz + 5% NaCl + 0 20% Antı Foam + 6% Extender + 0 125 pps Lost cırculatıon material	11 44	12 60	2 08
Tail 3538' - 4038' (100% excess)	275	500	Class "C"	6 36	14 80	1 33
2 nd INTERMEDIATE: Stage 1 Lead 5000' - 8940' (50% excess)	425	3940	LiteCrete + 3 pps Extender + 0 20% Anti Foam + 0 30 Retarder + 0 30% Dispersa	%	10 20	2 18
DV Tool @ 5,000'						
Stage 2 Lead 0' – 4900' (100% excess Circ to surface)	575	4900	35/65 Poz + 5% NaCl + 0.60% Extender + 0 20% Antı Foam	10 92	12 60	1 98
Tail 4900' - 5000' (50% excess)	50	100	Class "C" + 0 20% Retarde	er 635	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 7222'. At this depth an 8-3/4" directional hole will be initiated at an azimuth of 291°, building angle at 12.00°/100' to a max of 90° at a TVD of 7701' (MD 7974') This 8-3/4" hole will be continued on this 291° azimuth to a measured depth of 8162' where the azimuth will be turned at 4°/100' to an azimuth of 271° at a measured depth of 8689'. This azimuth will be continued for another 250'. 8-3/4" hole will be TD'd at 8939' MD (7701' 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 13,983' (TVD 7603'). 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 4054'-7668' 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

Anticipated spud date 12/15/2010

30 days drilling operations

14 days completion operations

GEG/mac March 26, 2010

BOPCO, L.P.

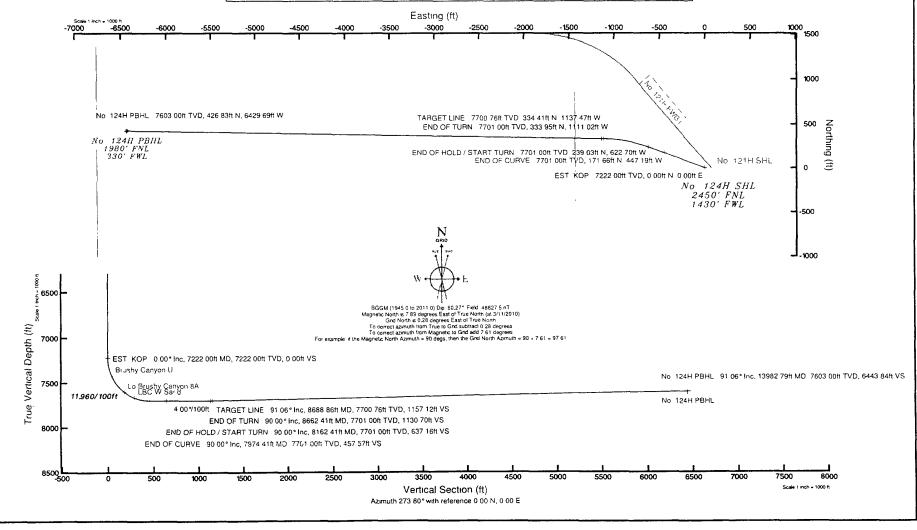
Location Eddy County, NM Field JRU Project Facility JRU No 124H Slot No 124H SHL Well No 124H Wellbore No 124H PWB

Plot reference wellpath is Prolim_2	
True vertical depths are referenced to Rig on No. 124H SHL (RT)	Grid System NAD83 / TM New Mexico State Planes Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No. 124H SHL (RT)	North Reference Grid north
Rig on No. 124H SHL (RT) to Mean Sea Level 3333 feet	Scale True distance
Mean Sea Level to Mud line (Facility: JRiJ No. 124H) 3314 feet	Depths are in feet
Coordinates are in feet referenced to Surface Location	Created by Victor Hernandez on 3/11/2010



	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	291 000	0 00	0 00	0 00	0 00	0 00	
EST KOP	7222 00	0 000	291 000	7222 00	0 00	0.00	0 00	0 00	
END OF CURVE	7974 11	90 000	291 000	7701 00	171 66	-447 19	11 96	457 57	
END OF HOLD / START TURN	8162 41	90 000	291 000	7701 00	239 03	-622 70	0 00	637 16	
END OF TURN	8662 41	90 000	271 000	7701 00	333 95	-1111 02	4 00	1130 70	
TARGET LINE	8688 86	91 058	271 000	7700 76	334 41	-1137 47	4 00	1157 12	
No 124H PBHL	13982 79	91 058	271 000	7603 00	426 83	-6429 69	0 00	5443 84	







Planned Wellpath Report Prelim_2 Page 1 of 5



Robotica	NCE WELLPATH IDENTIFICATION	en de la companya de	
Operator	BOPCO, L.P.	Slot	No. 124H SHL
Area	Eddy County, NM	Well	No. 124H
Field	JRU Project	Wellbore	No. 124H PWB
Facility	JRU No. 124H	and the second s	

REPORTSETURANT	ORMATION		
Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
orth Reference	Grid	User	Victor Hernandez
Scale	0.99994	Report Generated	3/11/2010 at 4:43:20 PM
Convergence at slot	0.28° East	Database/Source file	WA_Midland/No124H_PWB.xml

MARIN DE ARTHUROX CAMPION					ille Acc		
	Local coordinates		Grid c	oordinates	Geographic coordinates		
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude	
Slot Location	0.00	0.00	704952 43	475092 57	32°18'17 970"N	103°48'13 557"W	
Facility Reference Pt			704952.43	475092.57	32°18'17 970"N	103°48'13 557"W	
Field Reference Pt		1	697621.65	485218.03	32°19'58 517"N	103°49′38 415″W	

WELLPATH DATUM			. III is a state of the feet
Calculation method	Minimum curvature	Rig on No 124H SHL (RT) to GL	19.00ft
Horizontal Reference Pt	Surface Location	Rig on No 124H SHL (RT) to Mean Sea Level	3333.00ft
rtical Reference Pt	Rig on No. 124H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 124H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	273.80°



Planned Wellpath Report Prelim_2 Page 2 of 5

RODOROS	NCE WELLPATH IDENTIFICATION	Tank a Sail Mark a Sail and a Sail	
Operator	BOPCO, L.P.	Slot	No. 124H SHL
Area	Eddy County, NM	Well	No. 124H
Area Field	JRU Project	Wellbore	No. 124H PWB
Facility	JRU No. 124H		

WELLPA	TH DATA	(78 statio	ons) †=	interpola	ted/extr	apolated	station			a see seen made seen a m		
MD	Inclination	Azımuth	TVD	Vert Sect		East	Grid East	Grid North	Latitude	Longitude	DLS	Comments
[ft]	[°]	["]	[ft]	[ft]	[ft]	[ft] ;	[srv ft]	[srv ft]	32°18'17 970"N	103°48'13 557"W	[°/100ft]	
0 00	0 000	291 000	0.00	0.00	0 00	0.00	704952 43	475092 57				Tre On EST KOP
7222.00	0 0000	291 000	7222 00	0 00 ,	0 00	0.00	704952 43	475092 57	32°18'17 970"N	103°48'13 557"W s	····	
7322 00†	11 962	291 000	7321 28	9 94 .	3 73	-9 71	704942 72	475096 29	32°18'18 008"N	103°48'13 669"W \	11 96	
7422 00†	23 923	291 000	7416 24	39 31	14 75	-38 42	704914 01	475107 31	32°18'18 118"N	103°48'14 003"W	11 96	planta and a second of the contract of the con
7425.02†	24.285	the real transaction was at a second	engrenio-range bar of 1 1 2 4 3	40.49	THE PARTY OF THE PARTY P	£39.57	People's	475107.75		103°48'14.017'\\		Brushy Canyon U
7522 00†	35 885	291 000	7502 77	86 85	32 58	-84 88	704867 56	475125 14	32°18'18 297"N	103°48'14 544"W ;	11 96	
7622 00†	47 846	291 000	7577 10	150 49	56 45	-147 07	704805 37	475149 02	32°18'18 536"N	103°48'15 267"W	11 96	
7660 88†	52 497	291 000	7602 00	179 00 ;	67 15	-174 94	704777 50	475159 71	32°18'18 643"N	103°48'15 591"W ¹		Lo Brushy Canyon 8A
7722 00†	59 808	291 000	7636 02	227 46	85 33	-222 29	704730 15	475177 89	32°18'18 826"N	103°48'16 142"W	11 96	•
7795.57‡		291:000	7668.00	2	109.05	-284.08	704668.37	475201:61	32°18'19.063''N			LBCW Sand
7822 00†	71 769	291 000	7676 96	314 42	117 96	-307 29	704645 16	475210 51	32°18'19 152"N	103°48'17 130"W	11 96	
7922 00†	83 731		7698 14	407 61	152 91	-398 35	704554 10	475245 47	32°18'19 503"N	103°48'18 189"W	11 96	
7974 41	90 000	291 000	7701 00	457 57	171 66	-447 19	704505 27	475264 21 .	32°18'19 691"N	103°48′18 757"W		END OF CURVE
8022 00†	90 000	291 000	7701 00	503 03	188 71	-491 61	704460 84	475281 27	32°18'19 862"N	103°48'19 273"W	0 00	at the art addition and commence of the analysis of the commence of the commen
8122,00†	90.000	291.000	7701.00	598.56	224,55	.,584.97 _a		475317.10	32°18'20.221"N	103°48'20.359"W	0.00	Jacker Indianale a Società de la
8162 41	90 000	291 000	7701 00	637 16	239 03	-622 70	704329 77	475331 58	32°18'20 366"N	103°48'20 798"W ¡		END OF HOLD / START TURN
8222 00†	90 000	288 616	7701 00	694 44	259 22	-678 76	704273 71	475351 77	32°18'20 568"N	103°48'21 450"W	4 00	
8322 00†	90 000	284 616	7701 00	791 92 ,	287 81	-774 56	704177 91	475380 36	32°18'20 856"N	103°48'22 564"W	4 00	
8422 00†	90 000;	280 616	7701 00	890 72	309 65	-872 13	704080 35	475402 20	32°18'21 077"N	103°48'23 700"W	4 00	1
8522.001	90,000	276.616	7701.00	990-35	324.63	970.98	703981.51	475417.18	32°18'21.230"N	103°48'24.851"W	4.00	
8622 00†	90 000	272 616	7701 00	1090 32	332 68	-1070 63	703881 86	475425 22	32°18'21 314"N	103°48'26 011"W	4 00	
8662 41	90 000	271 000	7701 00	1130 70	333 95	-1111 02	703841 47	475426 50	32°18'21 329"N	103°48'26 482"W	4 00	END OF TURN
8688 86	91 058	271 000	7700 76	1157 12	334 41	-1137 47	703815 03	475426 96	32°18'21 335"N	103°48'26 790"W 3	4 00	TARGET LINE
8722 00†	91 058	271 000	7700 14	1190 21	334 99	-1170 60	703781 90	475427 54	32°18'21 342"N	103°48'27 176"W	0 00	
38822.00t	91.058	271 000	7698.30	1290 08	336.74	-1270.56	703681.94	475429.28	32°18'21.364"N	103°48'28.340"W	0 00	
8922 00†	91 058	110000000 1 100 100 10 10 10 10 10 10	7696 45	1389.94	338 48	-1370 53	703581 98	475431 03	32°18'21 386"N	103°48'29 505"W	0 00	
9022 00†	91 058,	271 000	7694 60	1489 81	340 23	-1470.50		475432 77	32°18'21 408"N	103°48'30 670"W	0 00	
9122 00†	91 058	271 000	7692 76	1589.67	341 98	-1570 47	703382 06	475434 52	32°18'21 431"N	103°48'31 834"W	0 00	
9222 00†	91 058	271 000	7690 91	1689 53	343 72	-1670 43		475436 27	32°18'21 453"N	103°48'32 999"W	0 00	
9322 00†		271.000		1789.40	345.47	1770.40	703182.13	i panagangangan panggangangganggan	32°18'21'475"N	103°48'34'164".W		
Market HANT	RESIDENCE OF STATE OF	white mark horse	10.17.A55.AA		W-7-33-7-74	BACATA TOTAL	BASE TAX BATTLA	Million Co Mill (22-6)	<u> </u>	and the management of the property of the prop	THE REPORT OF THE PARTY OF THE	THE BEAUTH WITH THE CONTRACTOR DESCRIPTION AND THE PARTY OF THE PROPERTY AND THE PARTY OF THE PROPERTY OF THE



Planned Wellpath Report Prelim_2 Page 3 of 5

Reported	NCE WELLPATH IDENTIFICATION		
Operator	BOPCO, L.P.	Slot	No. 124H SHL
Агеа	Eddy County, NM	Well	No. 124H
Field	JRU Project	Wellbore	No. 124H PWB
Facility	JRU No. 124H		

MD I	Inclination	4				d station					
[ft]		Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	DLS Comments
	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]		***************************************	[°/100ft]
9422 00†	91 058	271 000	7687 22	-1889 26	347 21	-1870 37	703082 17	475439 76	32°18'21 497"N	103°48'35 328"W	0.00,
9522 00†	91 058	271 000	7685 37	1989 12	348 96	-1970 34	702982 21	475441 50	32°18'21 519"N	103°48'36 493"W	0 00
9622 00†	91 058	271 000	7683 52	2088 99	350 70	-2070 31	702882 25 '	475443 25	32°18'21 541"N	103°48'37 657"W	0 00
9722 00†	91 058	271 000	7681 68	2188 85	352 45	-2170 27	702782 29	475444 99	32°18'21 563"N	103°48'38 822"W	0 00
9822.00†	91.058	271.000	7679.83	2288.72	354.20	2270.24	702682.33	475446,74	32°18'21.585"N	103°48¦39.987¦W	MARKO OO BICKER AND
9922 00†	91 058	271 000	7677 99	2388 58	355 94 :	-2370 21 t	702582 37	475448 48	32°18'21 607"N	103°48'41 151"W	0 00
10022 00†	91 058	271 000	7676 14	2488 44	357 69	-2470 18	702482 40	475450 23	32°18'21 629"N	103°48'42 316"W	0.00 ;
10122 00†	91 058	271 000	7674 29	2588 31	359 43]	-2570 14	702382 44	475451 98	32°18'21 652"N	103°48'43 481"W	0 00
10222 00†	91 058	271 000 ⁱ	7672 45	2688 17	361 18	-2670 11	702282 48 :	475453 72 '	32°18'21 674"N	103°48'44 645"W	0 00 ,
10322.00	. 91.058	271.000	7670.60	2788.04	362.92	-2770.08	702182.52	475455.47	32°18'21 696"N	103°48'45.810''W	
10422 00†	91 058	271 000	7668 75	2887 90	364 67	-2870 05	702082 56	475457 21	32°18'21 718"N	103°48'46 974"W	0 00
10522 00†.	91 058	271 000	7666 91	2987 76	366 42	-2970 01	701982 60	475458 96	32°18'21 740"N	103°48'48 139"W	0.00
10622 00†	91 058	271 000	7665 06	3087 63	368 16	-3069 98	701882 63 :	475460 70	32°18'21 762"N	103°48'49 304"W	0 00
10722 00†	91 058	271 000	7663 21	3187 49	369 91	-3169 95	701782 67	475462 45	32°18'21 784"N	103°48'50 468"W	0 00
10822,001	91.058	271.000	7661.37	3287.35	371.65	-3269.92	701682.71	475464.20	32°18'21.806"N	103°48 <u>1</u> 51.633"W	0.00 12 12 14
10922 00†	91 058	271 000	7659 52	3387 22	373 40	-3369 89	701582 75	475465 94	32°18'21 828"N	103°48'52 798"W	0 00
11022 00†	91.058	271 000	7657 67	3487.08	375 14	-3469 85	701482 79	475467 69	32°18'21 850"N	103°48'53 962"W	0 00 ,
11122 00†	91 058	271 000	7655 83	3586 95	376 89	-3569 82	701382 83	475469 43	32°18'21 872"N	103°48'55 127"W	0 00
11222 00†	91 058	271 000	7653 98	3686 81	378 63	-3669 79	701282 87	475471 18	32°18'21 894"N	103°48'56 291"W	0 00
11322.00	91,058	271.000	7652.13	3786.67	380.38	-3769 76	701182.90	475472.92	32°18'21.916"N	103°48'57:456"W	
11422 00†	91 058	271 000	7650 29	3886 54	382 13	-3869 72	701082 94 1	475474 67	32°18'21 938"N	103°48'58 621"W	0 00
11522 00†	91.058	271 000	7648 44	3986 40	383.87	-3969 69	700982.98	475476 41	32°18'21 960"N	103°48'59 785"W	0 00
11622 00†	91 058	271 000	7646 59	4086 26	385 62	-4069 66	700883 02 :	475478 16	32°18'21 982"N	103°49'00 950"W	0 00 ;
11722 00†	91.058	271 000	7644 75	4186 13	387 36	-4169 63	700783 06	475479 91	32°18'22 004"N	103°49'02 115"W	0 00 .
11822.00	91 058	271.000	7642.90	4285.99	389.11	4269:59	700683.10	475481.65	32°18'22.026"N	103°49'03.279"W	
11922 00†	91 058	271 000	7641 05	4385 86	390 85	-4369 56	700583 14	475483 40	32°18'22 049"N	103°49'04 444"W	0 00
12022 00†	91 058	271 000	7639 21	4485 72	392 60	-4469 53	700483 17	475485 14	32°18'22 071"N	103°49'05 609"W	0.00 :
12122 00†	91 058	271 000	7637 36	4585 58	394 35	-4569 50	700383 21	475486 89	32°18'22 093"N	103°49'06 773"W	0 00
12208 91†;	91 058	271 000	7635 76	4672 38	395 86	-4656 38	700296 33	475488 40 ;	32°18'22 112"N	103°49'07 785"W	0 00
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Planned Wellpath Report Prelim_2 Page 4 of 5

RDDDRD	NCE WELLPATH IDENTIFICATION	بماندي والمراجع المراجع	
Operator	BOPCO, L.P.	Slot	No. 124H SHL
Area	Eddy County, NM	Well	No. 124H
Field	JRU Project	Wellbore	No. 124H PWB
Facility	JRU No. 124H	and the property of the Mandalander Ale Mandalander and Mandalander Ale Mandalander and Ale an	

WELLPATI	H DATA (78	stations)	† = inter	polated/ex	trapolate	ed station	-			* * *		-
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude ,	Longitude	DLS Comments	
(ft)	[°]		[ft]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]			[°/100ft]	
12322 00†	91 058,	271 000	7633 67	4785 31	397 84	-4769 43	700183 29 :	475490 38	32°18'22 137"N	103°49'09 102"W	0 00	
12422 00†	91 058	271 000	7631 82	4885 17	399 58	-4869 40	700083 33	475492 12	32°18′22 159″N	103°49'10 267''W	0 00	
12522 00†	91 058	271 000	7629 97	4985 04 '	401 33	-4969 37 '	699983 37	475493 87	32°18'22 181"N	103°49'11 432''W	0 00	
12622 00†	91 058	271 000	7628 13	5084 90	403 07	-5069 34	699883 40	475495 62	32°18'22 203"N	103°49'12 596"W	0 00	
7.12722.00†	91.058	271.000	7626.28	5184.77	404.82	5169.30	699783.44	475497.36	32°18'22.225''N	103°49'13.761"W		Lsi
12822 00†	91 058	271 000	7624 43	5284 63	406 57	-5269 27	699683 48	475499 11	32°18'22 247"N	103°49'14 926"W	0 00	
12922 00†	91 058,	271 000	7622 59	5384 49 `	408 31	-5369 24	699583 52 -	475500 85	32°18′22 269"N	103°49'16 090''W	0 00	
13022 00†	91 058	271 000	7620 74	5484 36	410 06	-5469 21	699483 56	475502 60	32°18'22 291"N	103°49'17 255"W	0 00	
13122 00†	91 058	271 000	7618 90	5584 22	411 80	-5569 18	699383 60	475504 34	32°18'22 313"N	103°49'18 419"W	0 00	
13222.00†	91.058	271.000	7617.05	5684.09	413.55	-5669.14	699283.64	475506:09	32°18'22,335"N	403°49'19 .58 4"W		H.
13322 00†	91 058	271 000;	7615 20	5783 95	415 29	-5769 11	699183 67	475507 83	32°18'22 357"N	103°49'20 749"W	0 00	
13422 00†	91 058,	271 000	7613 36	5883 81	417 04	-5869 08	699083 71	475509 58	32°18'22 379"N	103°49'21 913"W	0 00	
13522 00†	91 058	271 000	7611 51	5983 68 -	418 79	-5969 05 ,	698983 75	475511 33	32°18'22 401"N	103°49'23 078"W	0 00	
13622 00†	91 058	271 000	7609 66	6083 54	420 53	-6069 01 .	698883 79	475513 07	32°18'22 423"N	103°49'24 243"W	0 00	
13722.00	91:058	271.000	7607.82	6183.40	422.28	-6168.98	698783.83	475514.82	32°18'22.445"N	103849'25.407"W		
13822 00†	91 058	271 0001	7605 97	6283 27	424 02	-6268 95	698683 87	475516 56	32°18'22 467"N [°]	103°49'26 572"W	0 00	
13922 00†	91 058	271 000 ^f	7604 12	6383 13	425 77 ,	-6368 92	698583 91	475518 31	32°18'22 489"N	103°49'27 736"W	0 00	
13982 79	91 058	271 000 🚉	7,603 00 ¹	6443 84	426.83 ²	-6429 69	698523 14	475519 37	\$\$502\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	. 103°49'28 444"W	0 00 No 124H PBHL	



Planned Wellpath Report Prelim_2 Page 5 of 5

ROUDERD	NCE WELLPATH IDENTIFICATION		
Operator	BOPCO, L.P.	Slot	No. 124H SHL
Area	Eddy County, NM	Well	No. 124H
Field	JRU Project	Wellbore	No. 124H PWB
Facility	JRU No. 124H	According 1977 The form of the control of the contr	

TARGETS			** **		-				
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East (srv ft)	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 124H PBHL	13982 79	7603 00	426 83	-6429 69		475519.37	32°18'22.502"N	103°49'28 444"W	point

SURVEY PROGR	AM Ref Wellbore: N	o. 124H PWB Ref Wellpath: Prelim_2		
Start MD	End MD	Positional Uncertainty Model	Log Name/Comment	Wellbore
[ft]	[ft]			***************************************
19 00	13982 79 Na	vıTrak (Standard)	l	No 124H PWB

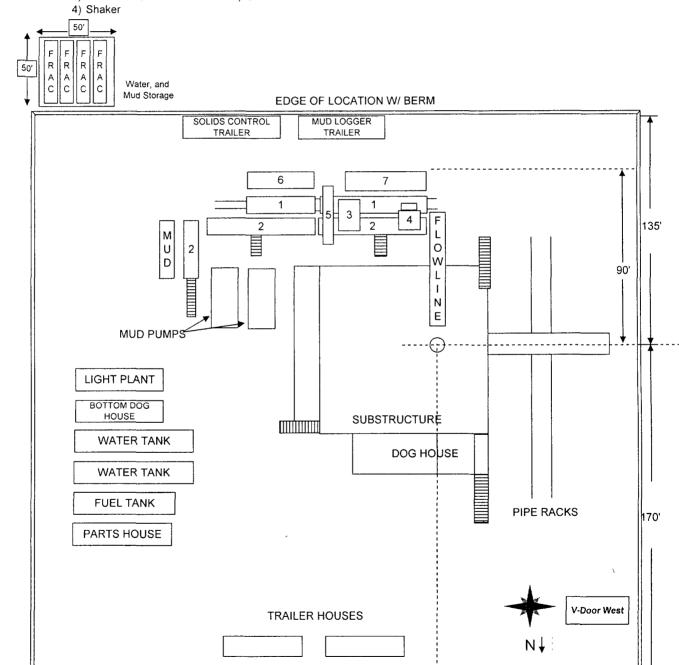


BOPCO, L.P. James Ranch Unit #124H Sec17,T23S-R31E Eddy County, NM

RIG LAYOUT SCHEMATIC INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

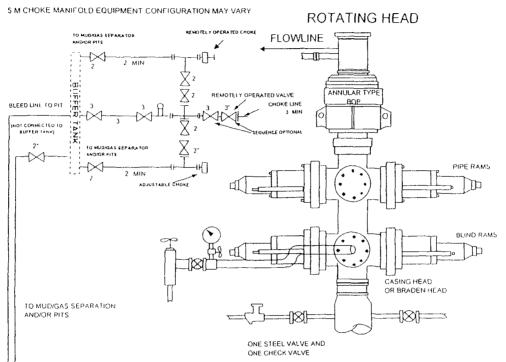
- 1) Roll Off Bin
- 5) Centrifuge
- 2) Steel Tank
- 6) Dewatering Unit
- 3) Mud Cleaner
- 7) Catch Tank



160

170

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



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

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

DIAGRAM 2

TO STEEL MUD TANKS

BLEED LINE TO FLARE PIT (NOT CONNECTED TO BUFFER TANK



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 22, 2010

Mr. Brad Glasscock BOPCO, L.P. 201 Main Street Fort Worth, TX 76102-3131 (817) 339-7185 MAR 2 4 2010

Re: JRU#124H, S17-23S-31E, 2450' FNL, 1430' FWL

Dear Mr. Glasscock:

Per our discussions earlier this month concerning the well referenced above, this location is "behind" previous drilling in the area and will not affect expected mining plans. Contingent upon this well being Delaware only well (nothing deeper), Mosaic has no objection to this location.

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 form requested.

Sincerely,

Dan Morehouse

Mine Engineering Superintendent

Mil

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: James Ranch Unit #124H

LEGAL DESCRIPTION - SURFACE. 2450' FNL, 1430' FWL, Section 17, T23S, R31E, Eddy County, NM. BHL 1980' FNL, 330' FWL, Section 18, 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 0.5 miles to lease road, on lease road go northwest 0.1 miles then west 0.1 miles to proposed location

C) Existing Road Maintenance or Improvement Plan:

See Exhibit "B" & "C"

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location

Existing road will be upgraded as needed. (See Exhibit "B")

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.

Page 2

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

The BOPCO operated James Ranch Unit #55 Battery is located in the SW quarter of NW quarter of Sec 17, T23S, R31E

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 #55 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 #55 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" & "E"

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.

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

No residences within 1 mile 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 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

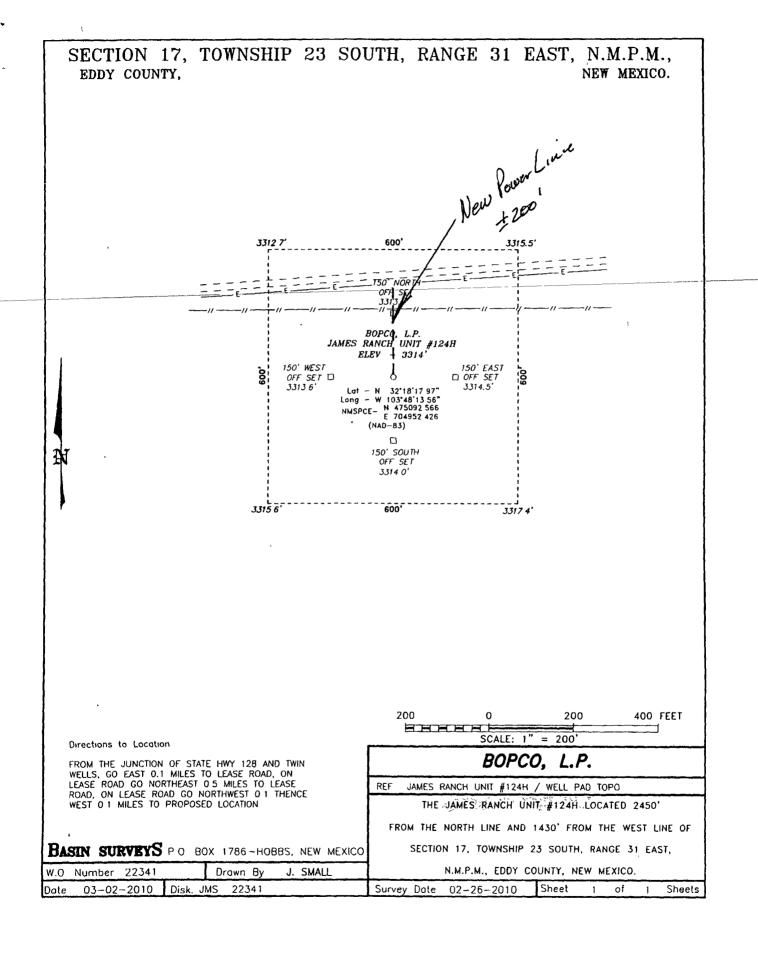
OPERATOR CERTIFICATION

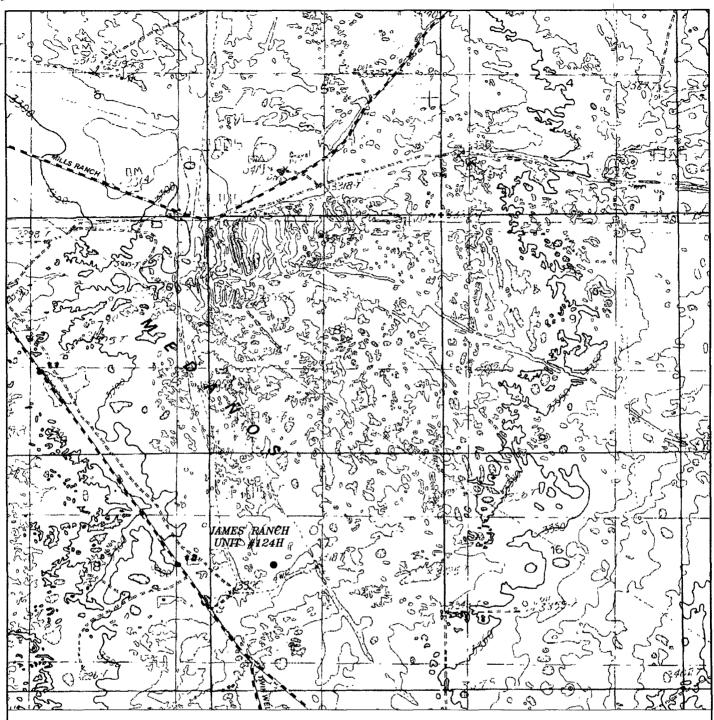
3/29/10

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

Date

Sary Serhard
Gary Gerhard

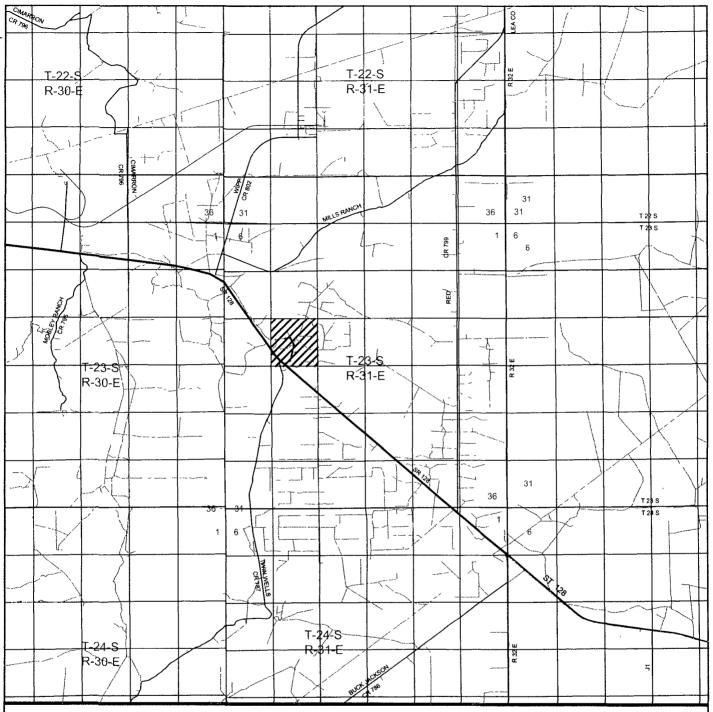






P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (575) 393-7316 — Office (575) 392-2206 — Fax basinsurveys.com

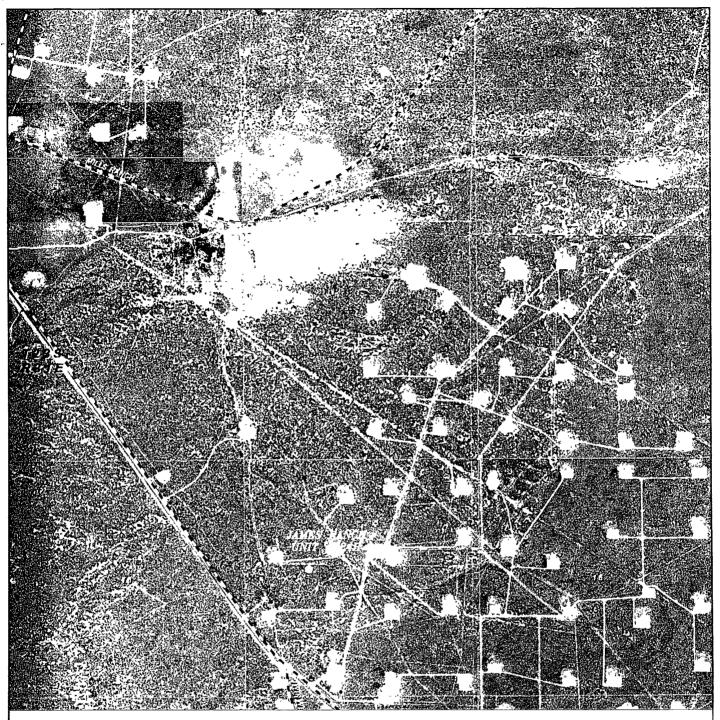
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Date	03-02-	-2010		1





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

WO Number JMS 22341	
Survey Date. 02-26-2010	3
Scale 1" = 2 Miles	4
Date 03-02-2010	Ĺ

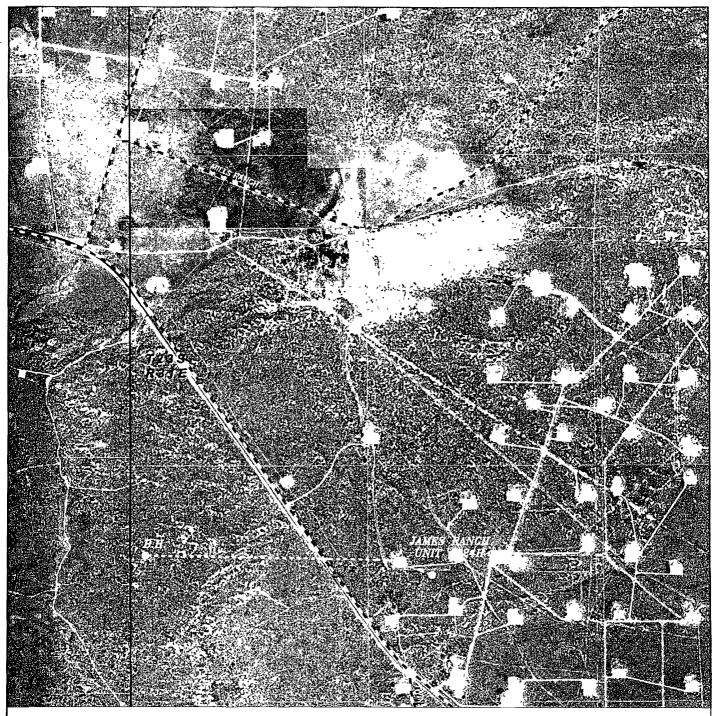




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Scale 1" = 2000'

YELLOW TINT — USA LAND BLUE TINT — STATE LAND NATURAL COLOR — FEE LANE



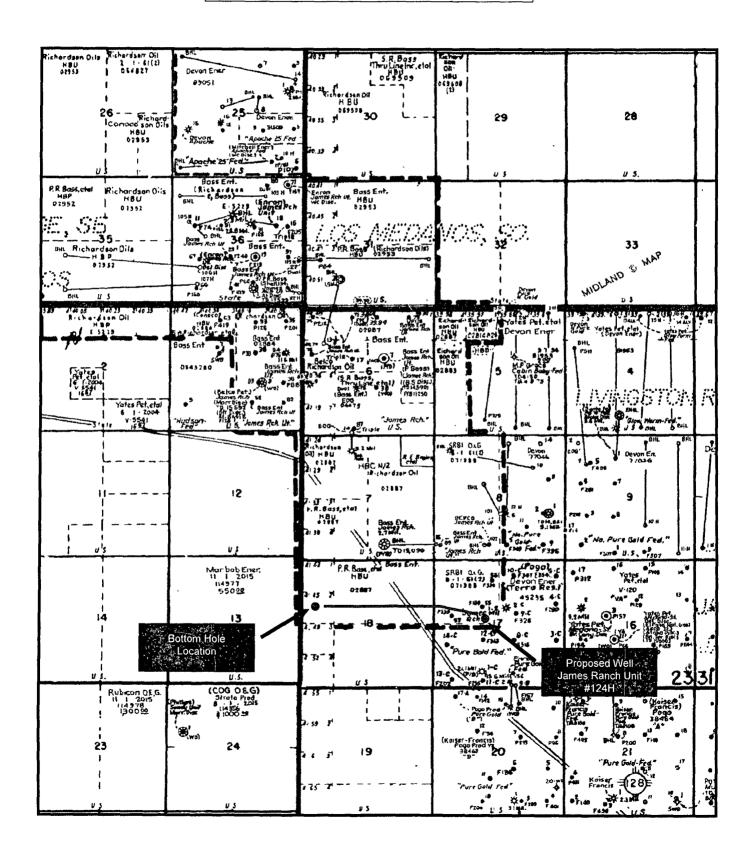


P 0 Box 1786 1120 N West County Rd Hobbs, New Mexico 88241 (575) 393-7316 - Office (575) 392-2206 - Fax basinsurveys com W O Number JMS 22341
Scale 1" = 2000'

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

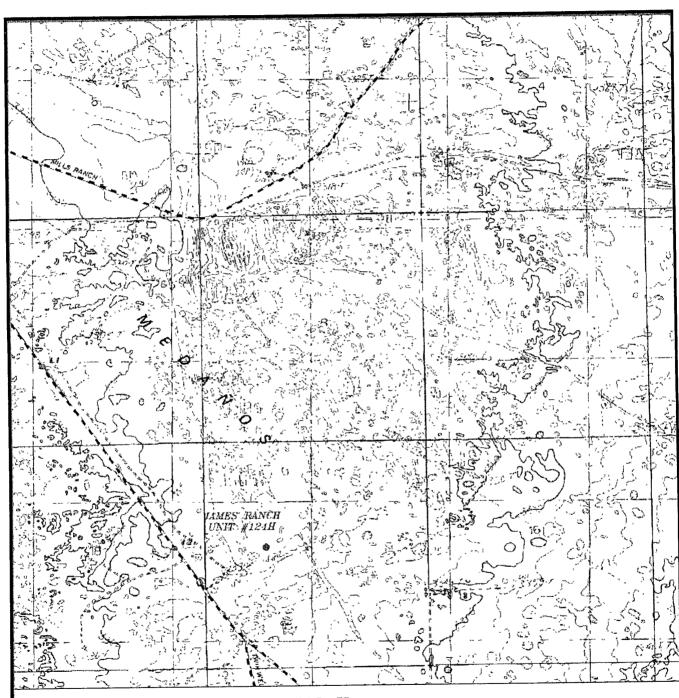
James Ranch Unit #124H Exhibit "A"





James Ranch Unit #124H Exhibit "C"

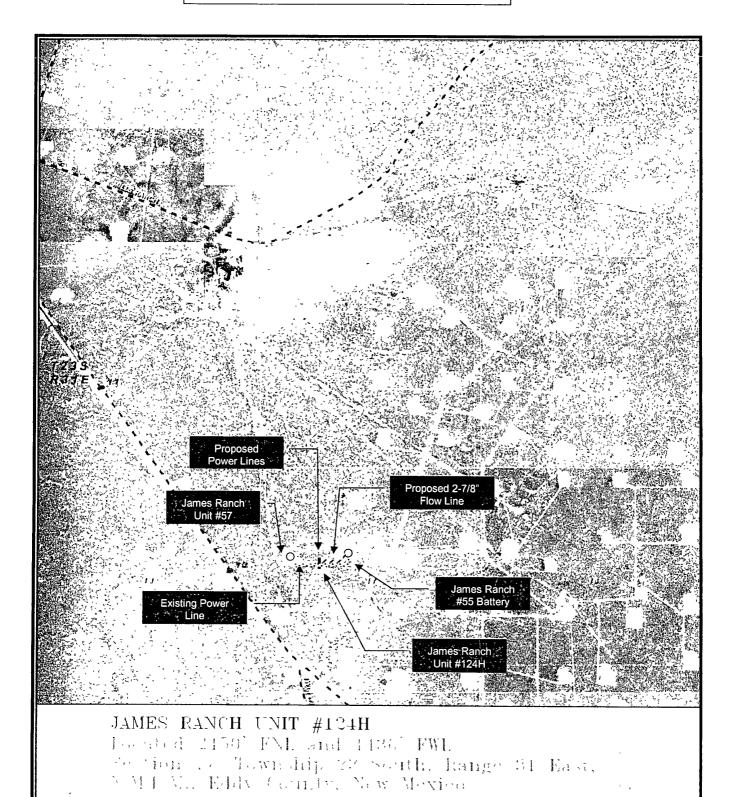




JAMES RANCH UNIT #124H Located 2450' FNL and 1430' FWL Section 17, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico.

James Ranch Unit #124H Exhibit "E"





PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: BOPCO, L. P. LEASE NO.: NM-02887A WELL NAME & NO.: JAMES RANCH UNIT # 124H SURFACE HOLE FOOTAGE: 2450' FNL & 1430' FWL 1980' FNL & 330' FWL BOTTOM HOLE FOOTAGE Section 17, T. 23 S., R. 31 E., NMPM SHL LOCATION: Section 18, T. 23 S., R. 31 E., NMPM BHL LOCATION: Eddy County, New Mexico COUNTY:

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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, geophysical exploration other than 3-D operations, and 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 ft. 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.

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.

Commercial Well Determination

Well is outside of NMNM – 70965G 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.

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 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.

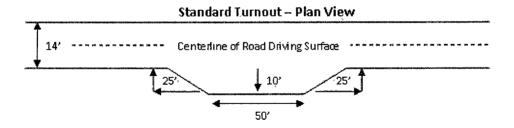
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

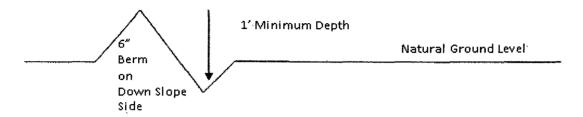


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill 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.

- center line of roadway shoofder-1001 tatismon
Intervisible tumouts shall be constructed on
all single lone roads on all blind curves with
additional tumouts as needed to keep spacing
below 1000 feet ribiw tuennut Put **Typical Turnout Plan** height of full at shoulder stope 3:1 2 1 **Embankment Section** crown type earth surface 03°- 05 ft/ft aggregate surface 02 - .04 6/6 paved surface 02 - .03 ft/ft Depth measured ham the bottom of the disch **Side Hill Section** tranel surface -

Figure 1 – Cross Sections and Plans For Typical Road Sections

Typical Outsloped Section

[slope 2-d%]
Typical Inslope Section

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

- a. 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.

R-111-P Potash

Possible water and brine flows in the Salado, Casitle, Delaware, and Bone Spring. 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 684 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 10' 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 Lamar Limestone.

- 3. The minimum required fill of cement behind the 7 inch production casing is:
 - a. First stage to DV tool, cement shall:
 - Ement 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

- 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.

DHW 042910

II. 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 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 <u>24</u> 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

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

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

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.

III. 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 <u>no</u> 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	<u>lb/acre</u>
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