RECEIVED
OCT 20 2009
NMOCD ARTESIA

09-916

ATS-09-574

OCD-ARTESIA

R-111-POTASH

Split Estate

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
NMNM-66425

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No.

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

8. Lease Name and Well No.
Laguna Salado 22 Federal 6H

2. Name of Operator
Devon Energy Production Company, LP

9 API Well No.
30 015 37371

3a Address **20 North Broadway, Oklahoma City, Oklahoma City 73102-8260**

3b. Phone No. *(include area code)*
405-228-8699

10. Field and Pool, or Exploratory
Laguna Salado; Delaware

4 Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **Unit C NE/4 NW/4 1172' FNL & 2510' FWL PP: 2065' FNL & 1650' FEL**
At proposed prod. zone **BHL: Unit P SE/4 SE/4 330' FSL & 660' FEL**

UNORTHODOX LOCATION

11 Sec., T. R. M. or Blk. and Survey or Area
SEC 22 T23S R29E

14 Distance in miles and direction from nearest town or post office*
Approximately 7 miles east of Loving, 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 drig unit line, if any)	16 No of acres in lease	17. Spacing Unit dedicated to this well
1172'	**640 Acres**	**120 Acres**
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
130'	**6707' TVD 11,478' MD**	**CO-1104**
21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23 Estimated duration
2974' GL		**45 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
Judy A. Barnett	**Judy A. Barnett**	**08/13/2009**

Title: **Regulatory Analyst**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Linda S.C. Rundell		OCT 15 2009
Title: **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

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

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 12, 2005

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-37371	96878	Hanoun Ranch ~~LAGUNA SALADO;~~ DELAWARE NE

Property Code	Property Name	Well Number
35499	LAGUNA SALADO "22" FEDERAL	6H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	2974'

Surface Location

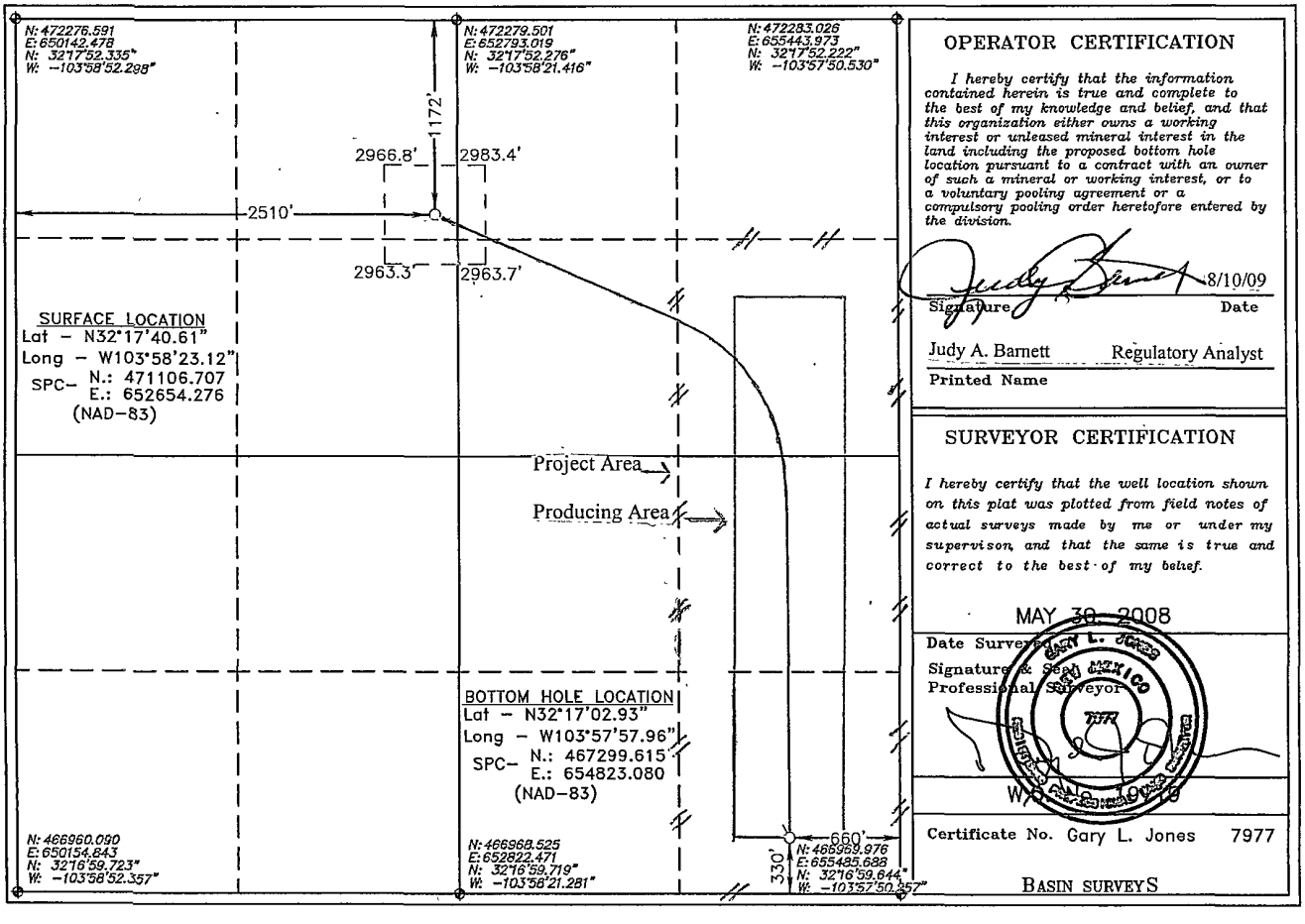
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	22	23 S	29 E		1172	NORTH	2510	WEST	EDDY

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
P	22	23 S	29 E		330	SOUTH	660	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
120			

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



OPERATOR CERTIFICATION

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

Signature 8/10/09
Date

Judy A. Barnett Regulatory Analyst
Printed Name

SURVEYOR CERTIFICATION

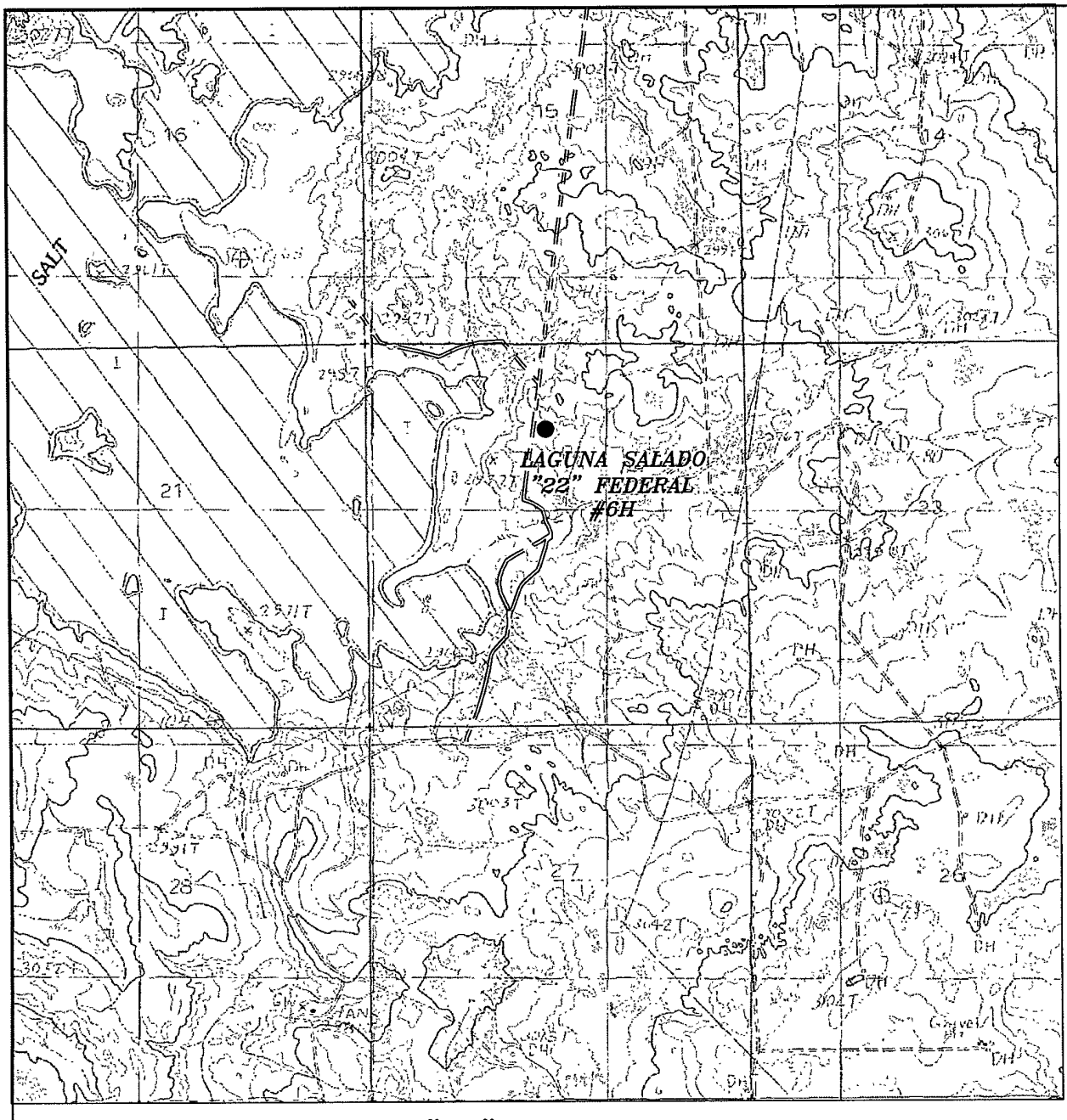
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

MAY 30, 2008
Date Surveyed

Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

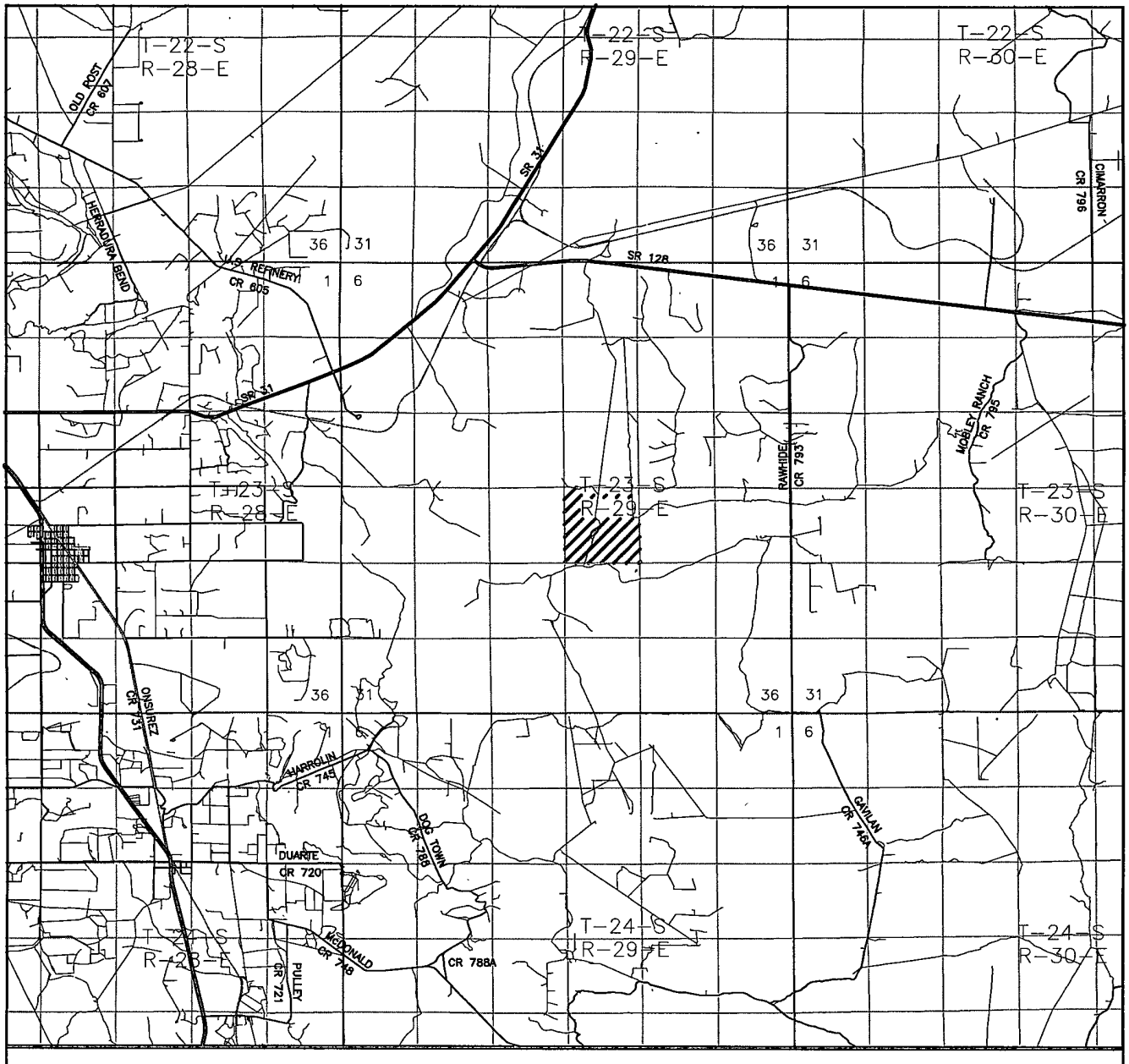


LAGUNA SALADO "22" FEDERAL #6H
Located at 1172' FNL AND 2510' FWL
Section 22, Township 23 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 19719
Survey Date:	05-30-2008
Scale:	1" = 2000'
Date:	06-02-2008

DEVON ENERGY PROD. CO., L.P.



LAGUNA SALADO "22" FEDERAL #6H
Located at 1172' FNL AND 2510' FWL
Section 22, Township 23 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

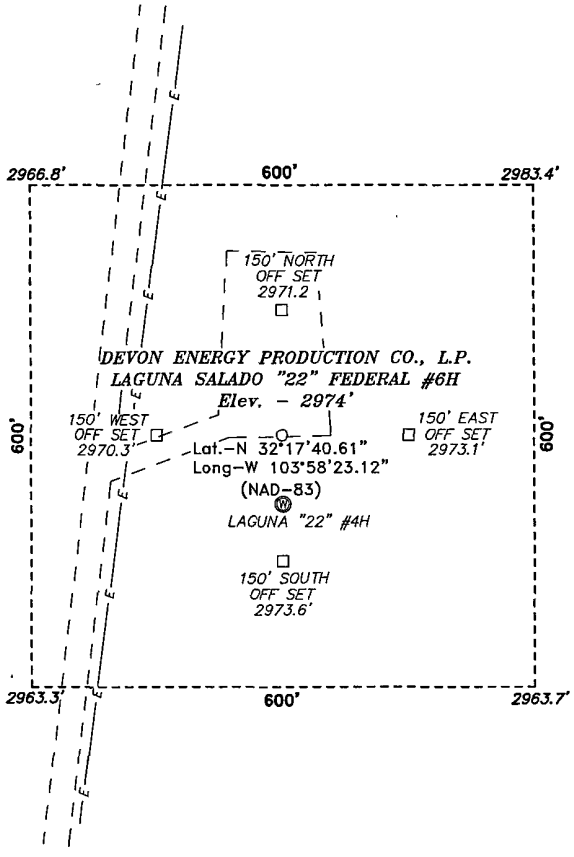
basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 19719
Survey Date:	05-30-2008
Scale:	1" = 2 MILES
Date:	06-02-2008

DEVON ENERGY PROD. CO., L.P.

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF HWY 128 AND RAWHIDE, GO SOUTH ON RAWHIDE FOR 3.3 MILES TO END OF PAVEMENT, GO WET 3.0 MILES TO LEASE ROAD, GO NORTH 0.8 MILES TO PAD "22" #2 AND PROPOSED WELL.

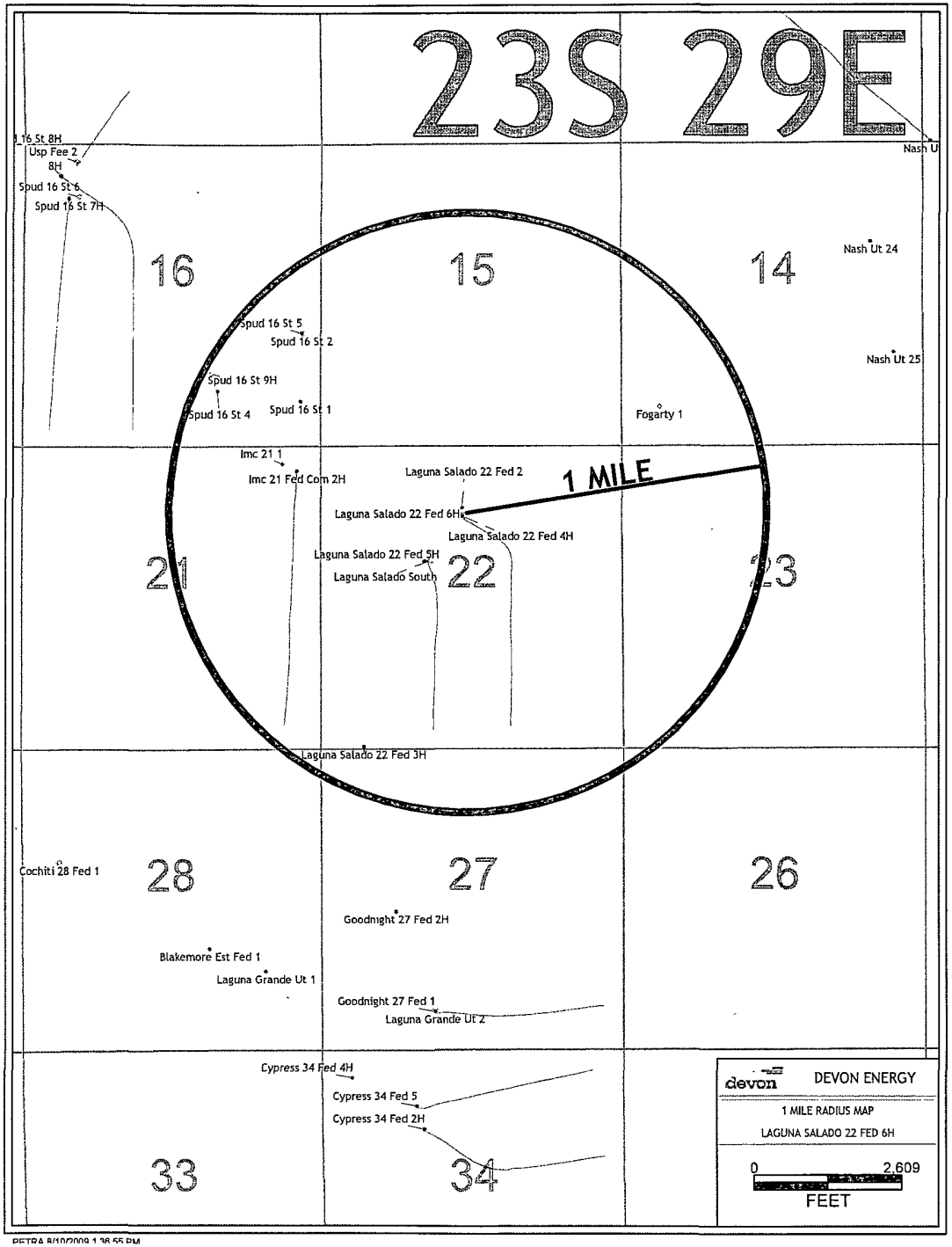
DEVON ENERGY PROD. CO., L.P.

REF: LAGUNA SALADO "22" FEDERAL #6H / WELL PAD TOPO

THE LAGUNA SALADO "22" FEDERAL #6H LOCATED 1172' FROM THE NORTH LINE AND 2510' FROM THE WEST LINE OF SECTION 22, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 19719	Drawn By: J. M. SMALL		
Date: 06-02-2008	Disk: 19719 JMS	Survey Date: 05-30-2008	Sheet 1 of 1 Sheets



PETRA 8/10/2009 1:38:55 PM

DRILLING PROGRAM

Devon Energy Production Company, LP
Laguna Salado 22 Federal 6H
Surface Location: 1172 FNL & 2510 FWL, Unit C, Sec 22 T23S R29E, Eddy, NM
Bottom Hole Location: 330 FSL & 660 FEL, Unit P, Sec 22 T23S R29E, Eddy, NM

1. **Geologic Name of Surface Formation**

   a. Quaternary

2. **Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

a.	Base of Salt	2791'	water
b.	Delaware	3026'	
c.	Bell Canyon	3065'	Oil
d.	Cherry Canyon	3884'	Oil
e.	Brushy Canyon	5098'	Oil
f.	Total Depth	11,478'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 80' and circulating cement back to surface. Potash/fresh water sands will be protected by setting 9 5/8" casing at 2900' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 9 5/8" casing.

3. **Casing Program:**

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0'– 80'	13 3/8"	Surface ~~Conductor~~	48#	ST&C	H-40
12 1/4"	80'–2900'	9 5/8"	0-2900'	40#	LT&C	K-55
8 ½	2900'-6000'	5 1/2"	0'-6000'	20#	LT&C	N-80
8 ½"	6000-11478	5 ½"	6000-11,478'	20#	BT&C	N-80

See COA →

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	19.25	43.25	8.05
9 5/8"	1.81	2.47	3.64
5 ½"	1.25	1.56	2.05

4. **Cement Program:** ← See COA

   a. 13 3/8" Surface — **Lead** w/ 100sx Cl C + 2% Calcium Chloride + 0.125#/sx CF + 56.3% FW. 14.80 ppg, Yld 1.35 cf/sx. TOC to surface.

b.	9 5/8"	Intermediate	**Lead** w/ 730sx 35:65 POZ Fly Ash Cl C + 5% bwow Sodium Chloride + 0.125#/sx CF + 5#/sx LCM-1 + 6% bwoc Bentonite + 95.8% FW. 12.70 ppg, Yld 1.95 cf/sx. **Tail** w/ 300 sx Class C Cement. TOC @ surface. NO YIELD — used 1.32
c.	5 1/2"	Production	**Stage 1: Lead** w/ 380sx 35:65 POZ Fly Ash Cl H + 0.125#/sx CF + 6% bwoc Bentonite + 0.5% bwoc FL-52A +102.1% FW. 12.50 ppg. Yld 1.94 cf/sx. **Tail** w/ 1430sx (50:50) POZ Fly Ash Cl H + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% + bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 58.3% FW. 14.20 ppg. Yld 1.31 cf/sx. TOC @ ~~2400'~~ surface See COA **Stage 2: DV Tool @ 4,500'** **Lead** w/ 625sx 35:65 POZ Fly Ash Cl C + 5% bwow Sodium Chloride + 0.125#/sx CF + 6% bwoc Bentonite + 0.3% bwoc FL52-A + 100.7% FW. 12.70 ppg, Yld 1.94 cf/sx. **Tail** w/ 200sx 60:40 POZ Fly Ash: Cl C + 5% bwow Sodium Chloride + 0.125#/sx CF + 0.1% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 65.4% FW. 13.80 ppg Yld 1.37 cf/sx.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately ~~500'~~ above the 9 5/8" casing shoe. All casing is new and API approved See COA

5. **Pressure Control Equipment:**

See COA

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (5M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (~~3000~~ psi WP) and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. An annular and rotating head will be installed on the 13 3/8" surface casing and utilized to setting depth of the 9 5/8" intermediate casing.

The annular and associated equipment will be tested ~~to 1000 psi with the rig pump before drilling~~ ok **out the 13 3/8" casing shoe**. The BOPE will be installed on the 9 5/8" intermediate casing and utilized continuously until total depth is reached. Prior to drilling out the 9 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi WP rating.

6. **Proposed Mud Circulation System**

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0 - 80'	8.4-9.0	32-34	NC	FW/Gel
80–2900'	9.0-9.4	28-30	NC	FW/Brine
2900-6900'	9.0-94	28-40	NC-40	Fresh
6900-11478'	9.4-9.6	32-40	12-16cc	Fresh

See COA

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Auxiliary Well Control and Monitoring Equipment:

a. A Kelly cock will be in the drill string at all times.
b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

7. **Logging, Coring, and Testing Program:**

a. Drill stem tests will be based on geological sample shows.
b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
c. The open hole electrical logging program will be: ← See COA
   i. Total Depth to Intermediate Casing — Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
   ii. Total Depth to Surface — Compensated Neutron with Gamma Ray
   iii. No coring program is planned
   iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

8. **Potential Hazards:**

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2500 psi and estimated BHT 110°. No H2S is anticipated to be encountered.

9. **Anticipated Starting Date and Duration of Operations:**

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production

devon

Devon Energy

Eddy Co., New Mexico (Nad 83)
Laguna Salado 22 Fed #6H
Luguna Salado 22 Fed #6H

Lateral #1

Plan: Design #1

Standard Planning Report

11 August, 2009

CUDD
DRILLING & MEASUREMENT
SERVICES

CUDD Drilling & Measurement Services

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Luguna Salado 22 Fed #6H
Company:	Devon Energy	TVD Reference:	WELL @ 2992.00ft (Original Well Elev)
Project:	Eddy Co., New Mexico (Nad 83)	MD Reference:	WELL @ 2992.00ft (Original Well Elev)
Site:	Laguna Salado 22 Fed #6H	North Reference:	Grid
Well:	Luguna Salado 22 Fed #6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Project Eddy Co., New Mexico (Nad 83)

Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Laguna Salado 22 Fed #6H, Sec 22, T-23S, R-29E

Site Position:		Northing:	471,106.71 ft	Latitude:	32° 17' 40.675 N
From:	Map	Easting:	652,654.28 ft	Longitude:	103° 58' 23.079 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.19 °

Well Luguna Salado 22 Fed #6H

Well Position	+N/-S	0.00 ft	Northing:	471,106.71 ft	Latitude:	32° 17' 40.675 N
	+E/-W	0.00 ft	Easting:	652,654.28 ft	Longitude:	103° 58' 23.079 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	2,992.00 ft	Ground Level:	2,974.00 ft

Wellbore Lateral #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/11/2009	7.98	60.24	48,831

Design Design #1

Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	6,707.00	0.00	0.00	150.33

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,095.92	0.00	0.00	6,095.92	0.00	0.00	0.00	0.00	0.00	0.00	
6,985.92	89.00	113.40	6,668.79	-223.62	516.64	10.00	10.00	0.00	113.40	
8,029.27	89.00	113.40	6,687.00	-638.00	1,474.00	0.00	0.00	0.00	0.00	Target A (LS22F#6H)
9,358.95	89.86	179.89	6,701.91	-1,687.36	2,164.64	5.00	0.06	5.00	89.71	
11,478.70	89.86	179.89	6,707.00	-3,807.10	2,168.81	0.00	0.00	0.00	0.00	PBHL - TD (LS22F#6

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Luguna Salado 22 Fed #6H
Company:	Devon Energy	TVD Reference:	WELL @ 2992.00ft (Original Well Elev)
Project:	Eddy Co., New Mexico (Nad 83)	MD Reference:	WELL @ 2992.00ft (Original Well Elev)
Site:	Laguna Salado 22 Fed #6H	North Reference:	Grid
Well:	Luguna Salado 22 Fed #6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0 00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0 00
2,791.00	0.00	0.00	2,791.00	0.00	0.00	0.00	0.00	0.00	0 00
Base of Salt									
3,026.00	0.00	0.00	3,026.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
3,065 00	0.00	0.00	3,065.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
3,884 00	0 00	0.00	3,884.00	0 00	0.00	0.00	0 00	0.00	0.00
Cherry Canyon									
5,098 00	0.00	0.00	5,098.00	0.00	0.00	0.00	0 00	0.00	0 00
Brushy Canyon									
6,095 00	0.00	0.00	6,095 00	0.00	0.00	0.00	0 00	0.00	0 00
KOP - Build 10°/100'									
6,095 92	0.00	0 00	6,095.92	0.00	0.00	0.00	0.00	0.00	0.00
6,985.00	88.91	113.40	6,668.77	-223 25	515.80	449.30	10.00	10 00	0.00
EOC - Hold 89° @ 113.4°									
6,985 92	89.00	113 40	6,668.79	-223.62	516.64	450.04	10.00	10.00	0 00
8,029.27	89.00	113 40	6,687.00	-638 00	1,474.00	1,283.99	0.00	0 00	0.00
KOP - Build 5°/100' - Target A (LS22F#6H)									
9,358 00	89.86	179.84	6,701.91	-1,686.41	2,164.64	2,536.81	5.00	0.06	5.00
EOC - Hold 89.86° @ 179.89°									
9,358.95	89.86	179.89	6,701.91	-1,687.36	2,164.64	2,537.64	5 00	0.09	5.00
11,478.70	89.86	179.89	6,707.00	-3,807.10	2,168.81	4,381.52	0.00	0.00	0 00
PBHL - TD (LS22F#6H)									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,791 00	2,791.00	Base of Salt		0.00	
3,026.00	3,026.00	Delaware		0 00	
3,065.00	3,065 00	Bell Canyon		0.00	
3,884.00	3,884.00	Cherry Canyon		0.00	
5,098.00	5,098.00	Brushy Canyon		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
6,095.00	6,095.00	0.00	0.00	KOP - Build 10°/100'
6,985.00	6,668.77	-223 25	515.80	EOC - Hold 89° @ 113.4°
8,029.27	6,687.00	-638 00	1,474.00	KOP - Build 5°/100'
9,358 00	6,701.91	-1,686.41	2,164.64	EOC - Hold 89 86° @ 179.89°

devon

Project: Eddy Co., New Mexico (Nad 83)
Site: Laguna Salado 22 Fed #6H
Well: Laguna Salado 22 Fed #6H
Wellbore: Lateral #1
Design: Design #1

CUDD DRILLING & MEASUREMENT SERVICES

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6095.92	0.00	0.00	6095.92	0.00	0.00	0.00	0.00	0.00	
3	6985.92	89.00	113.40	6668.79	-223.62	516.64	10.00	113.40	450.04	
4	8029.27	89.00	113.40	6687.00	-638.00	1474.00	0.00	0.00	1283.89	Target A (LS22F#6H)
5	9358.95	89.86	179.89	6701.91	-1687.36	2164.64	5.00	89.71	2537.84	
6	11478.70	89.86	179.89	6707.00	-3807.10	2168.81	0.00	0.00	4381.52	PBHL - TD (LS22F#6H)

ANNOTATIONS

TVD	MD	Annotation
6095.00	6095.00	KOP - Build 10°/100'
6668.77	6985.00	EOC - Hold 89° @ 113.4°
6687.00	8029.27	KOP - Build 5°/100'
6701.91	9358.00	EOC - Hold 89.86° @ 179.89°

PROJECT DETAILS Eddy Co., New Mexico (Nad 83)

Geodetic System	US State Plane 1983
Datum	North American Datum 1983
Ellipsoid	GRS 1980
Zone	New Mexico Eastern Zone
System Datum	Mean Sea Level

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Target A (LS22F#6H)	6687.00	-638.00	1474.00	470468.71	654128.27	32° 17' 34.312 N	103° 58' 5.931 W	Point
PBHL - TD (LS22F#6H)	6707.00	-3807.10	2168.81	467299.61	654823.08	32° 17' 2.928 N	103° 57' 57.963 W	Point

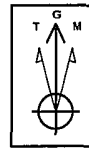
WELL DETAILS Luguna Salado 22 Fed #6H

Ground Level: 2974.00
WELL @ 2992.00ft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	471106.71	652654.28	32° 17' 40.675 N	103° 58' 23.079 W	

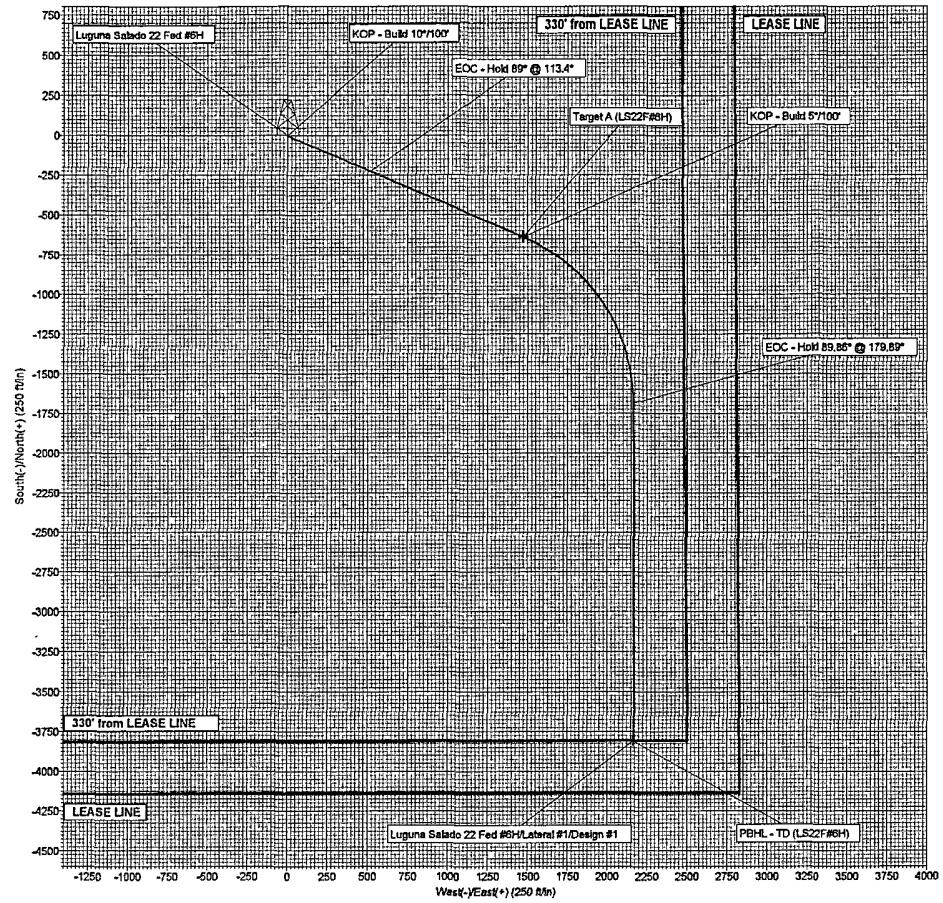
Plan Design #1 (Luguna Salado 22 Fed #6H/Lateral #1)

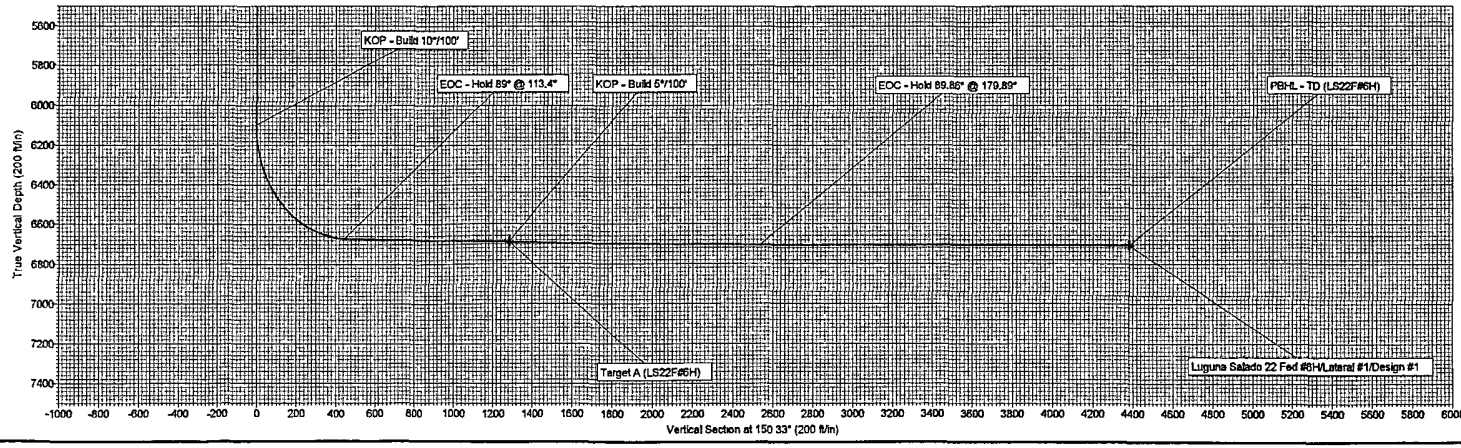
Created By: Mike Starkey — Date: 16:33, August 11 2009
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

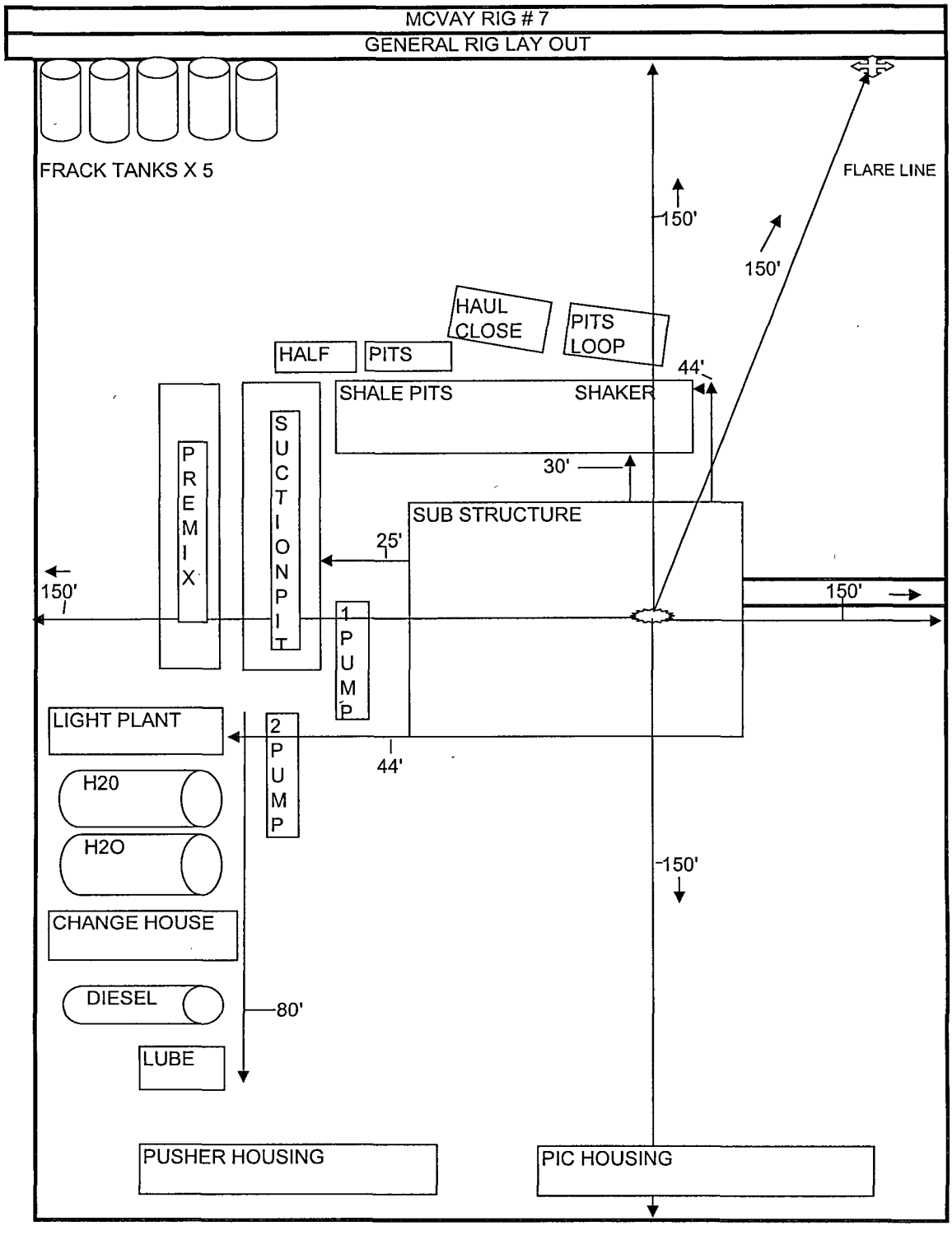


Azimuths to Grid North
True North: -0.19°
Magnetic North: 7.79°

Magnetic Field
Strength: 48831.0snT
Dip Angle: 60.24°
Date: 8/11/2009
Model: IGRF200510

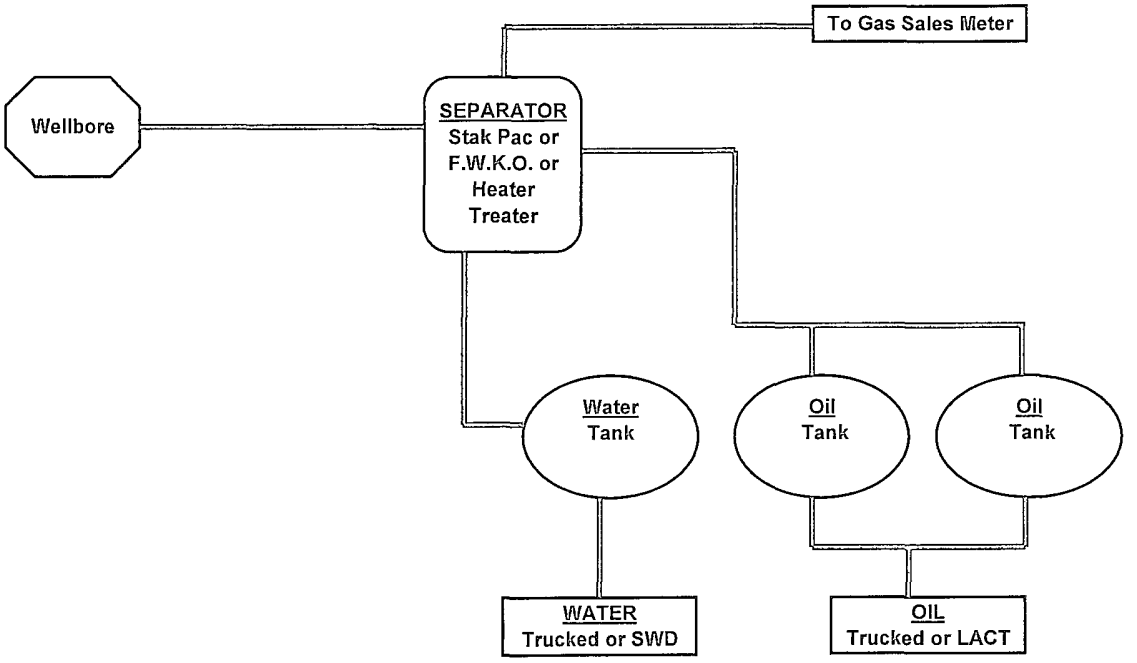





MCVAY RIG # 7
GENERAL RIG LAY OUT
FRACK TANKS X 5
FLARE LINE
150'
150'
HAUL CLOSE
PITS LOOP
HALF
PITS
44'
SHALE PITS
SHAKER
30'
PREMIX
SUCTION PIT
SUB STRUCTURE
25'
150'
150'
1 PUMP
LIGHT PLANT
2 PUMP
44'
H20
H2O
150'
CHANGE HOUSE
DIESEL
80'
LUBE
PUSHER HOUSING
PIC HOUSING

DEVON ENERGY PRODUCTION COMPANY LP

General Production Facilities Diagram



NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Laguna Salado 22 Federal 6H
Surface Location: 1172 FNL & 2510 FWL, Unit C, Sec 22 T23S R29E, Eddy, NM
Bottom hole Location: 330 FSL & 660 FEL, Unit P, Sec 22 T23S R29E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.

2. Wear ring will be properly installed in head.

3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 5000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.

6. All choke lines will be anchored to prevent movement.

7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.

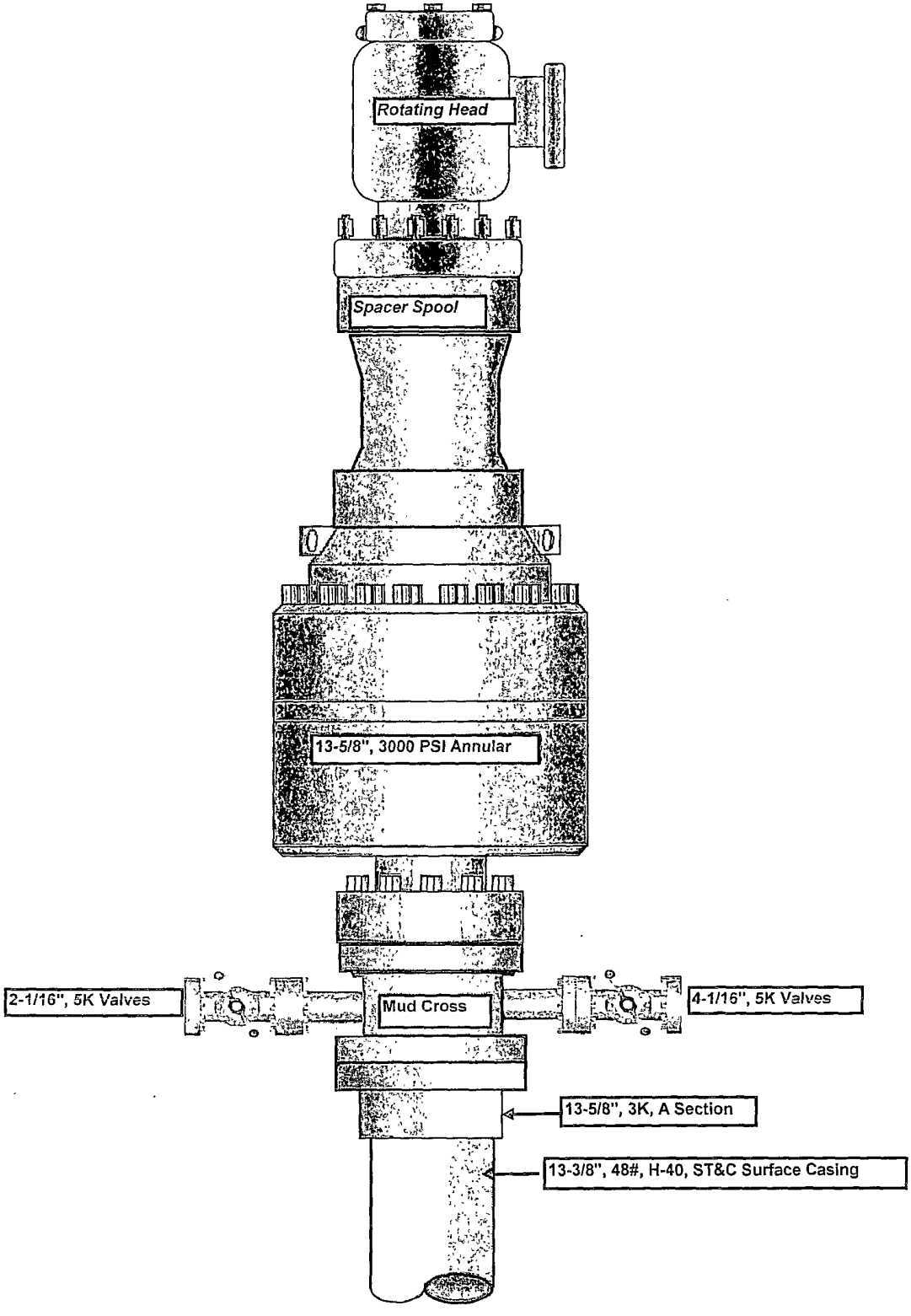
8. Will maintain a kelly cock attached to the kelly.

9. Hand wheels and wrenches will be properly installed and tested for safe operation.

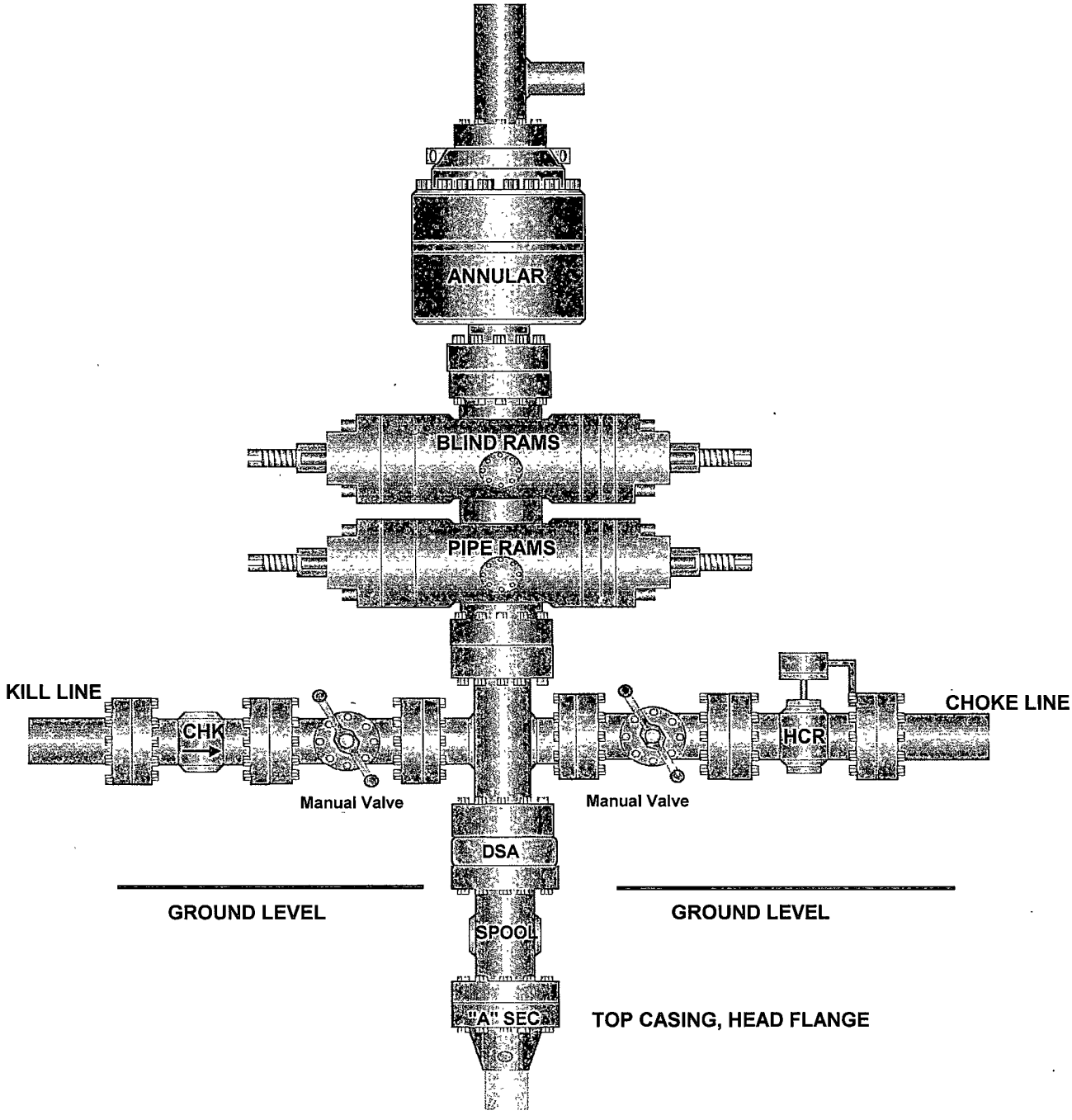
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.

11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

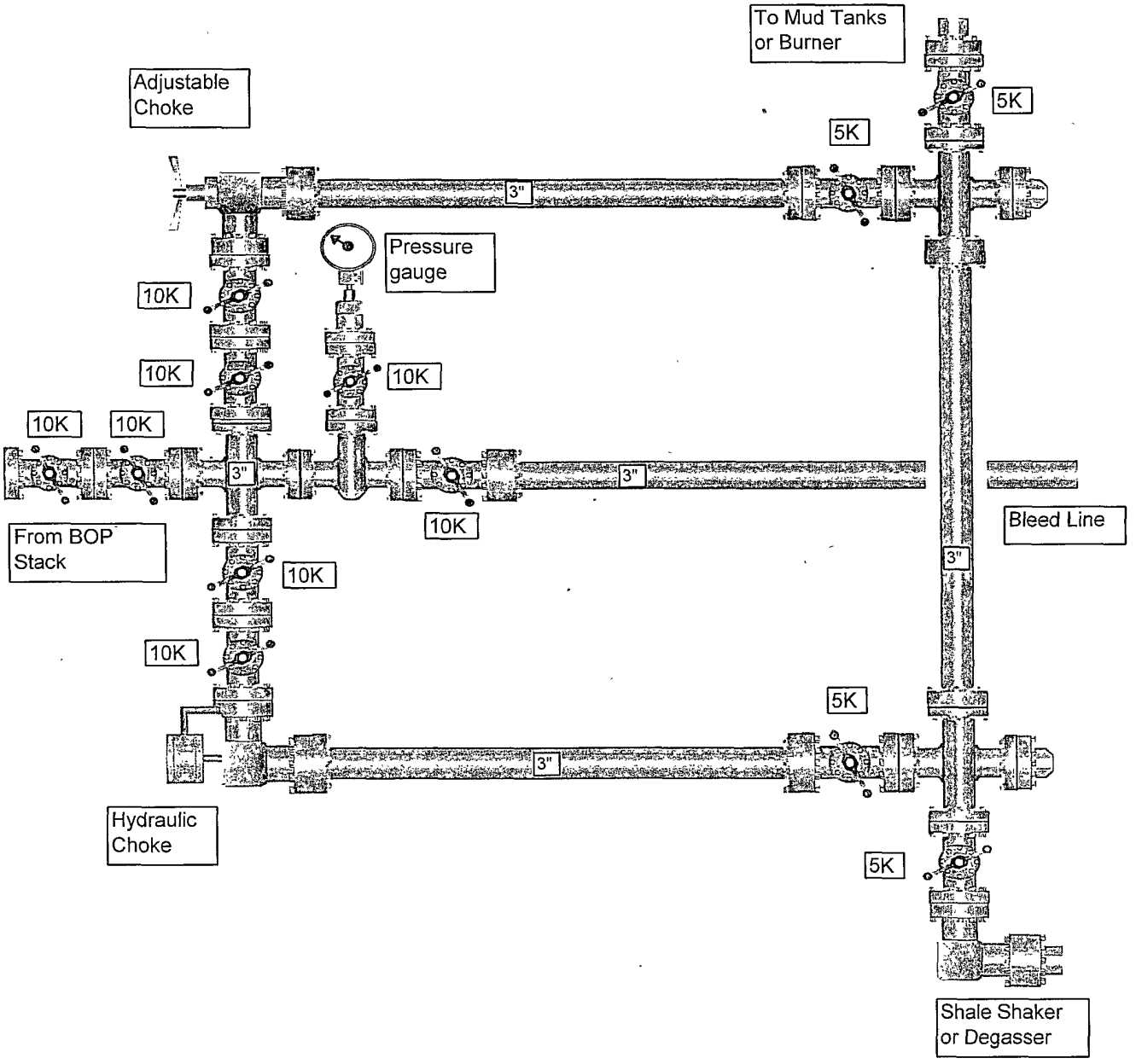
13-5/8" 3K Annular



11" x 5,000 psi BOP Stack

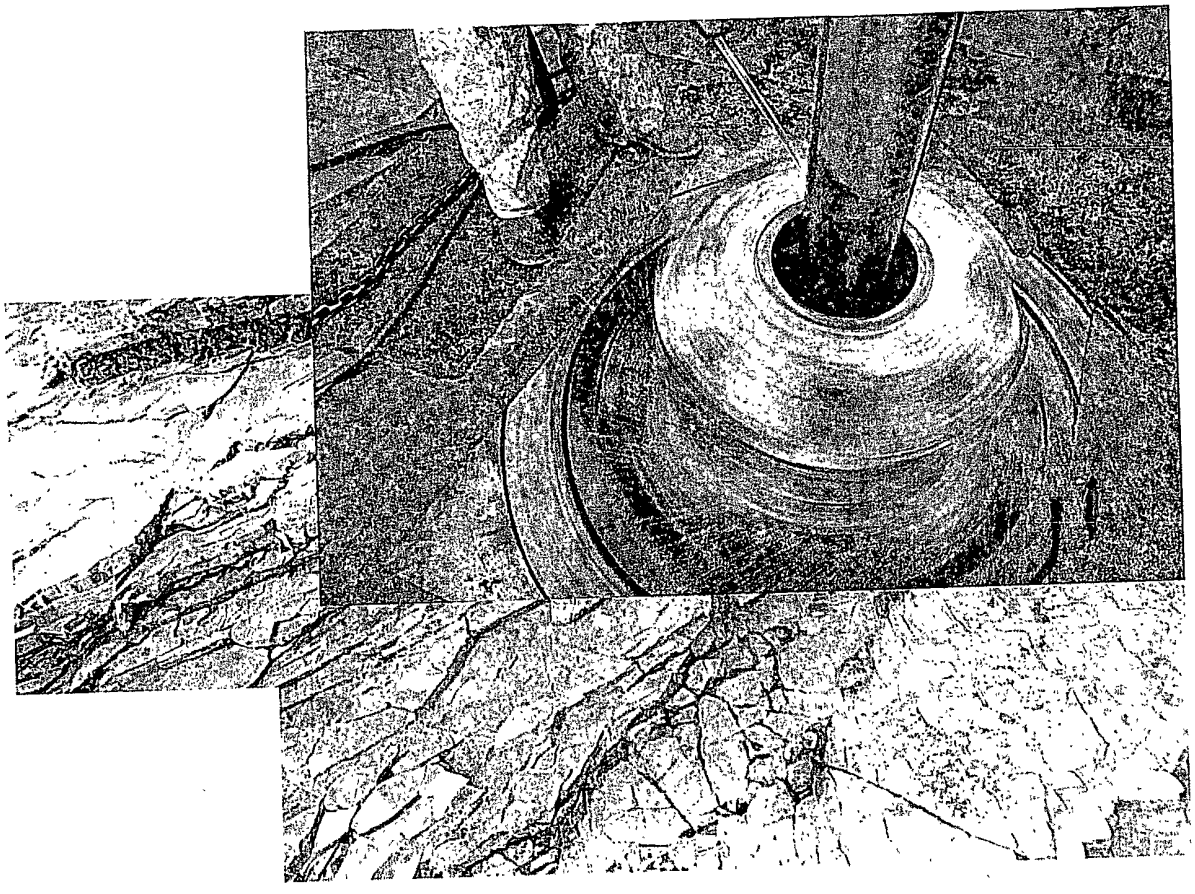


10,000 PSI CHOKE MANIFOLD



devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2008

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

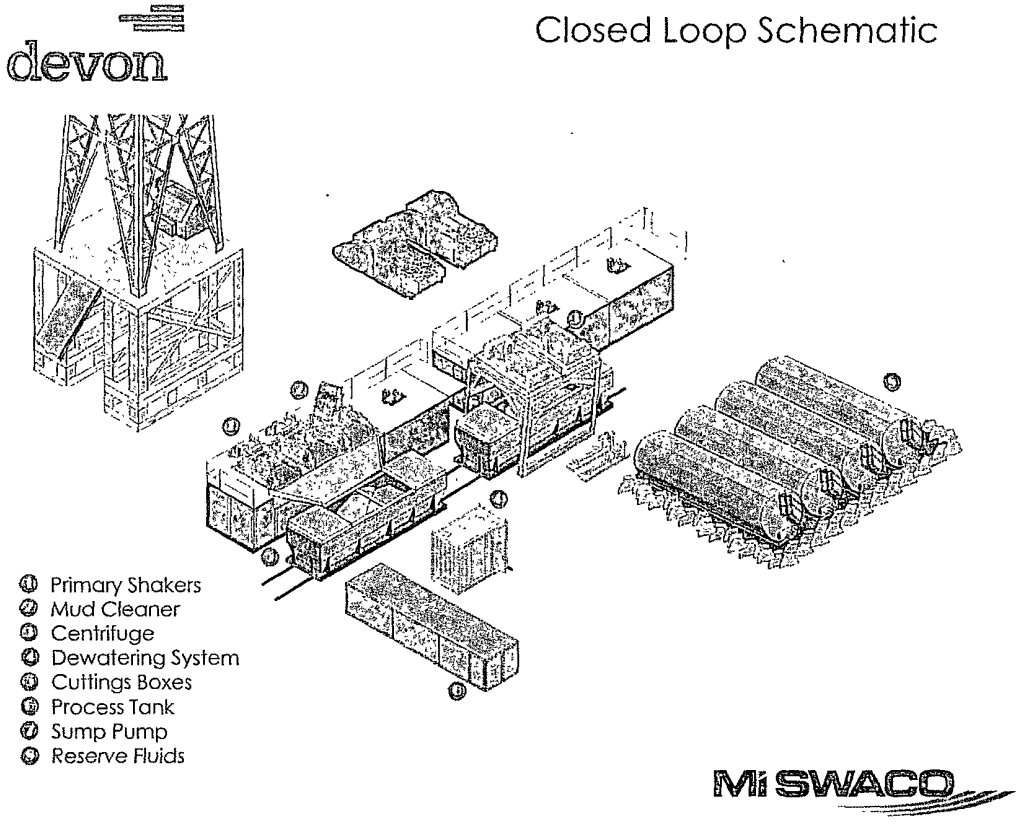
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

SURFACE USE PLAN

Devon Energy Production Company, LP

Laguna Salado 22 Federal 6H

Surface Location: 1172 FNL & 2510 FWL, Unit C, Sec 22 T23S R29E, Eddy, NM

Bottom hole Location: 330 FSL & 660 FEL, Unit P, Sec 22 T23S R29E, Eddy, NM

1. **Existing Roads:**
   a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by Basin Surveys.
   b. All roads into the location are depicted on Exhibit 3.
   c. Directions to Location: From the junction of Hwy 128 and Rawhide, go south on Rawhide for 3.3 miles to end of pavement, go west 3.0 miles to lease road, go north 0.8 miles to pad 22 #2 and proposed well.

2. **New or Reconstructed Access Roads:**
   a. There will be no new roads constructed.
   b. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

3. **Location of Existing Wells:**
   One Mile Radius Plat shows all existing and proposed wells within a one-mile radius of the proposed location. See attached plat.

4. **Location of Existing and/or Proposed Production Facilities:**
   a. In the event the well is found productive, the Laguna 22 Federal 2 tank battery would be utilized and the necessary production equipment will be installed at the well site. See Production Facilities Layout diagram.
   b. If necessary, the well will be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
   c. All flow lines will adhere to API standards.
   d. If the well is productive, rehabilitation plans are as follows:
      i. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

5. **Location and Types of Water Supply:**
   This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in the C-102. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, proper authorizations will be secured. If a poly pipeline is used, the size, distance, and map showing route will be provided to the BLM via sundry notice.

6. **Construction Materials:**
All caliche utilized for the drilling pad will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

7. **Methods of Handling Waste Material:**
   a. Drill cuttings will be disposed.
   b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
   c. The supplier, including broken sacks, will pick up salts remaining after completion of well.
   d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
   e. Disposal of fluids to be transported by the following companies:
      i. American Production Service Inc, Odessa TX
      ii. Gandy Corporation, Lovington NM
      iii. I & W Inc, Loco Hill NM
      iv. Jims Water Service of Co Inc, Denver CO

8. **Ancillary Facilities:** No campsite or other facilities will be constructed as a result of this well.

9. **Well Site Layout**
   a. Exhibit D shows the proposed well site layout with dimensions of the pad layout.
   b. This exhibit indicated proposed location of sump pits and living facilities.
   c. A closed loop system will be utilized.
   d. If a pit or closed loop system is utilized, Devon will comply with the NMOCD requirements 19.15.17 and submit form C-144 to the appropriate NMOCD District Office. A copy to be provided to the BLM.

10. **Plans for Surface Reclamation:**
   a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.
   b. In order to return the location and road to their pristine nature, location leveled, weather
   c. permitting, within 120 days after abandonment.
   d. The location and road will be rehabilitated as recommended by the BLM.
   e. If the well is a producer and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.
   f. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not

necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

11. Surface Ownership

a. The surface is owned by a Private Landowner and an agreement has been reached. The minerals are owned and administered by the U.S. Federal Government. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas. Landowner information is as follows:

Mosaic Potash Inc.
1361 Potash Road
Carlsbad, NM 88220

b. The proposed road routes and the surface location will be restored as directed by the BLM.

12. Other Information:

a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sagebush, yucca and miscellaneous weeds. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
b. There is no permanent or live water in the general proximity of the location.
c. There are no dwellings within 2 miles of location.
d. A Cultural Resources Examination will be completed by Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.

13. Bond Coverage:

Bond Coverage is Nationwide; Bond # is CO-1104

Operators Representative:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

Jim Cromer
Operations Engineer Advisor
Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500
Oklahoma City, OK 73102-8260
(405) 228-4464 (office)
(405) 694-7718 (Cellular)

Don Mayberry
Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250
(575) 748-3371 (office)
(575) 746-4945 (home)

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this _13th_ day of __August, 2009.
Printed Name: Judy A. Barnett
Signed Name:
Position Title: Regulatory Analyst
Address: 20 North Broadway, OKC OK 73102
Telephone: (405)-228-8699
Field Representative (if not above signatory):
Address (if different from above):
Telephone (if different from above):

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Prod.
LEASE NO.:	NM66425
WELL NAME & NO.:	6H Laguna Salado 22 Fed
SURFACE HOLE FOOTAGE:	1172' FNL & 2510' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 660' FEL
LOCATION:	Section 22, T. 23 S., R 29 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.

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave and Karst

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

Cave/Karst Surface Mitigation

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

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

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

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

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

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

Cave/Karst Subsurface Mitigation

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

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

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

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

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

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

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

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Closed Loop System: v-door east

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

E. 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.

F. 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.

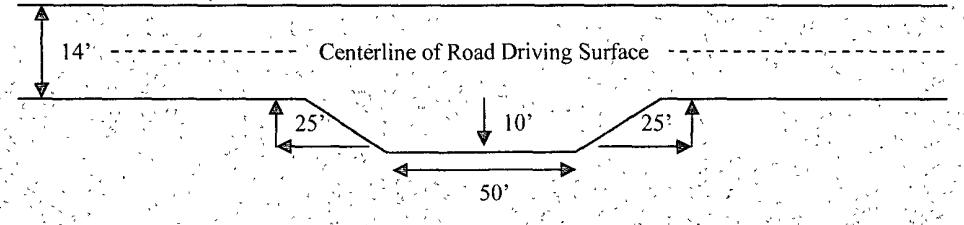
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

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:

Standard Turnout – Plan View

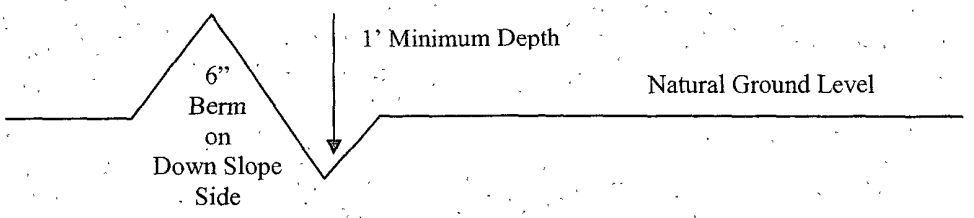


Drainage

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.

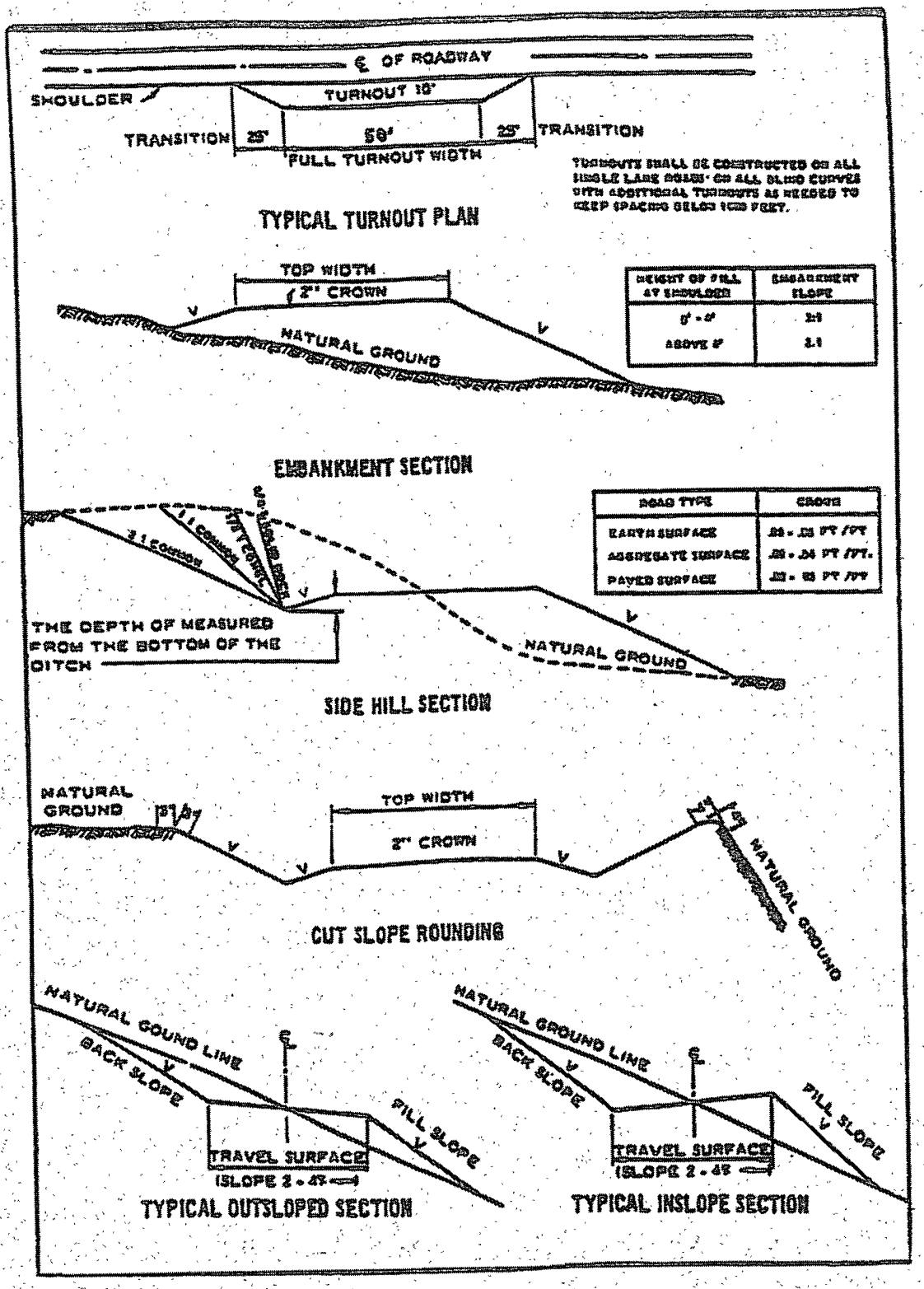
A gate shall be constructed and fastened securely to H-braces.

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



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. If Hydrogen Sulfide is encountered, please provide measured values 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. 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 requirements in effect.
High cave/karst.
Possible high pressure air pockets in the Salado.
Possible lost circulation in the Delaware Mountain Group and Bone Spring formations.

1. The **13-3/8** inch surface casing shall be set **above the salt at approximately 80 feet** and cemented to the surface. **Since no shallow fresh water is expected, brine water mud should be used to drill this segment.**

    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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    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. **Casing to be set in the Fletcher Anhydrite or Lamar Limestone, which is estimated to be encountered between 2950' and 3150'. Casing to be set a minimum of 100' and not more than 600' below the salt. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to R-111-Potash.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   a. First stage to DV tool, cement shall:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

   b. Second stage above DV tool, cement shall:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. 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.

5. **Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed. This includes all pressure tests of casing.**

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.

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 **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure. 5M system requires 5M annular.**

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

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

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

   c. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

   e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILLING MUD

Brine mud to be used to drill to top of Delaware formation.

E. DRILL STEM TEST

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

WWI 091209

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

C. ELECTRIC LINES

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

Seed Mixture 3, for Shallow 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 (*Setaria magrostachya*)	1.0
Green Spangletop (*Leptochloa dubia*)	2.0
Side oats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

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

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.