Form 3160-3
(April 2004)

OCD-ARTESIA

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 - 054856

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.
Crow Flats A Federal 2H (307133)

2. Name of Operator
RSC Resources Limited Partnership 245801

9. API Well No.
30-015-39800

3a. Address **6824 Island Cir., Midland, Tx 79707**

3b. Phone No. *(include area code)*
432-553-1849

10. Field and Pool, or Exploratory
Dog Canyon : Wolfcamp (97970)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **250' FNL & 1220' FEL** UNORTHODOX LOCATION
At proposed prod. zone **2310' FNL & 330' FEL @ BHL**

11. Sec., T. R. M. or Blk. and Survey or Area
30 - T16S-R28E

14. Distance in miles and direction from nearest town or post office*
Approx 15 miles NW of Loco Hills, NM

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **330'**

16. No. of acres in lease
160

17. Spacing Unit dedicated to this well
E2 of NE4 ; 80 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **1700'**

19. Proposed Depth
6525' MD 8570

20. BLM/BIA Bond No. on file
NMB 000437

21. Elevations (Show whether DF, KDB, RT, GL, etc.).
3546' GL

22. Approximate date work will start*
12/01/2011

23. Estimated duration
25 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)*: **Randall Cate** — Date: **09/15/2011**

Title: **President**

Approved by *(Signature)*: /s/ W. W. Ingram — Name *(Printed/Typed)*: — Date: DEC 16 2011

Title: FIELD MANAGER — Office: CARLSBAD FIELD OFFICE

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

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

**(Instructions on page 2)*

Roswell Controlled Water Basin

RECEIVED
DEC 20 2011
NMOCD ARTESIA

EE ATTACHED FOR
ONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

OPERATOR CERTIFICATION

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

RSC Resources L.P.

9/15/11

Date

Randall Cate, President

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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 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
30-15-39800	17970	Dog CANYON; Wolfcamp

Property Code	Property Name	Well Number
307133	CROW FLATS A FED.	2H

OGRID No	Operator Name	Elevation
245 801	RSC RESOURCES, L.P.	3545.9'

Surface Location

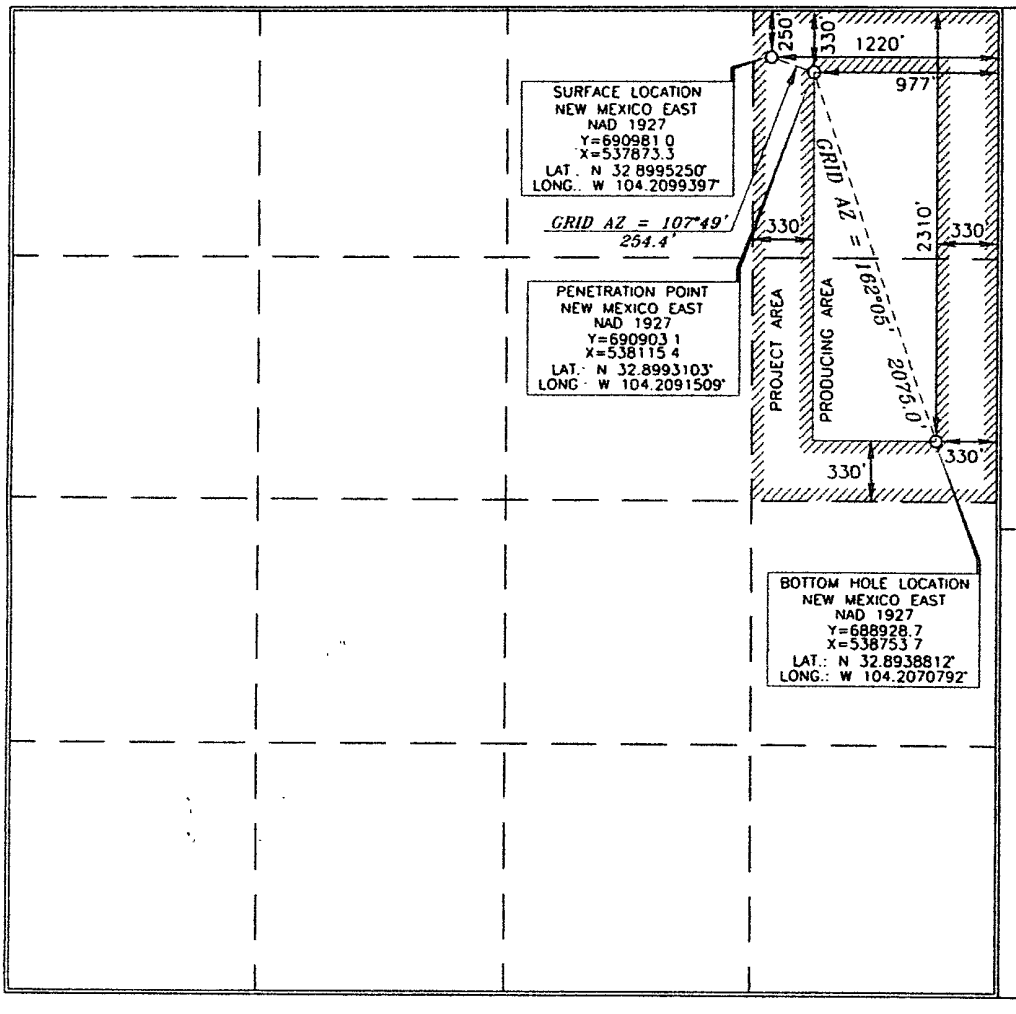
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	30	16 SOUTH	28 EAST, N.M.P.M.		250'	NORTH	1220'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	16 SOUTH	28 EAST, N.M.P.M.		2310'	NORTH	330'	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
80	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



OPERATOR CERTIFICATION

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

Signature Date 10/12/11

RANDALL CATE
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 supervision, and that the same is true and correct to the best of my belief.

15079
JULY 29, 2011
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number 15079

WO# 110729WL (KA)

RSC Resources Limited Partnership

Drilling and Operations Program

Crow Flats A Federal # 2H
250' FNL & 1220' FEL
Sec. 30, T16S, R28E, Eddy Co., NM

In accordance with Part 24 of Form 3160-3, Application For Permit To Drill, RSC Resources submits the following:

1. **The geologic surface formation is Quarternary.**

2. **The estimated tops of geologic markers are as follows:**

Yates *	250'	San Andres *	1,800'
Seven Rivers *	550'	Glorietta *	3,300'
Queen *	1,100'	Yeso /Tubb*	4,500'
Penrose *	1,270'	Abo *	5,300'
Grayburg *	1,520'	Wolfcamp*	6,490'

3. **Estimated depths of anticipated fresh water, oil, and gas:**

Fresh Water	150'
Oil/Gas	Denoted above with *

4. **Proposed Casing Program: All Casing Will Be New**

Hole Size	Casing	Wt/Ft/Grade	Depth	Jt Type
17.5"	13.375" -or-	48# H40 54.5# J55	0-500'	ST&C
8.75"	7.0"	26# HCP110	0-6,000'	LT&C
8.75"	7.0"	26# HCP110	6,000-6,600'	BT&C
6.125"	4.5"	11.6# P110	6,400-8,670'	LT&C

Minimum casing design : Collapse 1.125, Burst 1.0, Tensile 1.8.

If wellbore integrity cannot be maintained, then the 8.75" hole will be reamed out to 12.25" and new 9.625" casing contingency string will be run as follows:

12.25"	9.625"	40# J55	0-1,800'	LT&C

Cont. on pg 2

Revised

5. Cementing Program

13.375" Circ to Surface w/ ~400 Sx Class "C" w/ 2% CaCl, 1.35 yld; 75.2% excess

9.625" Circ to Surface w/ ~600 Sx Class "C" Light w/ 2% CaCl, 1.34 yld; 42.6% excess

7.0" Cmt tie back no deeper than 1,600' w/350 Sx Class H Light, 2.46 yld Tail w/ 350 Sx Class H containing FLA, 1.18 yld; 69.5% excess

In the event the 9.625" contingency casing string is not run, then will cmt w/ 400 Sx Class "H" Light, 2.46 yld. & tail w/ 400 Sx Class "H" containing FLA, 1.18 yld.; 46.7% excess. Will be sufficient to bring cmt to surface.

4.5" Liner w/ Packers will not be cemented.

All cmt volumes subject to results of fluid calipers

6. Pressure Control Equipment: 13 5/8" per operator call 11/7/2011 mmr

An 11" 3000# WP Double Ram BOP and annular BOP will be installed after setting the 13.375" casing. BOP and manifold will be tested by an independent tester to 3000# and annular to 1500# or .22 psi per foot, whichever is greater, not to exceed 70 percent of the minimum internal yield. Pressure tests to the above specifications will be conducted prior to drill out under all casing strings and again in 30 days from the date of first test as per BLM Onshore Order #2. Pipe and blind rams shall be activated each trip and the annular preventer at least weekly. BOP controls will be installed prior to drilling out and will remain the duration of drilling operations. BOP's will be inspected and rams operationally checked each 24 hour period and results recorded on the daily tour sheets. A Kelly cock and sub with full opening valve in open position will be available on the rig floor when the Kelly is not in use. Pit level indicators will be used.

7. Mud Program – Closed Loop System to be Used. See Attached Schematic of the Piping from the Choke Manifold to the CLS. The two 2" choke lines from the manifold will go to a valved buffer tank with lines to the mud gas separator/shakers and the mud tanks. . In the case of needing to circulate on chokes, the mud flow can be directed to either or both lines to optimize control of the well. The 3" "panic" line crosses underneath the buffer tank and directly to the flare stack.

Revised

Interval	Mud Wt.	Visc.	FL	Type of System
0'-500'	8.5-9.0	28-32	NC	Native, fresh
500'-6,600'	8.8-9.8	28-30	NC	Brine, cut brine
6,600'-TD	8.5-8.7	32-35	10-15	FW, polymer

Will use paper to minimize seepage, lime for PH control. All mud properties will be dictated by hole conditions and stability.

8. Evaluation Program: See Cont

Samples: 10' from intermediate casing to TD
Logging: Density/Neutron, Dual Laterolog. Gamma Ray to surface.
No cores or DSTs anticipated.

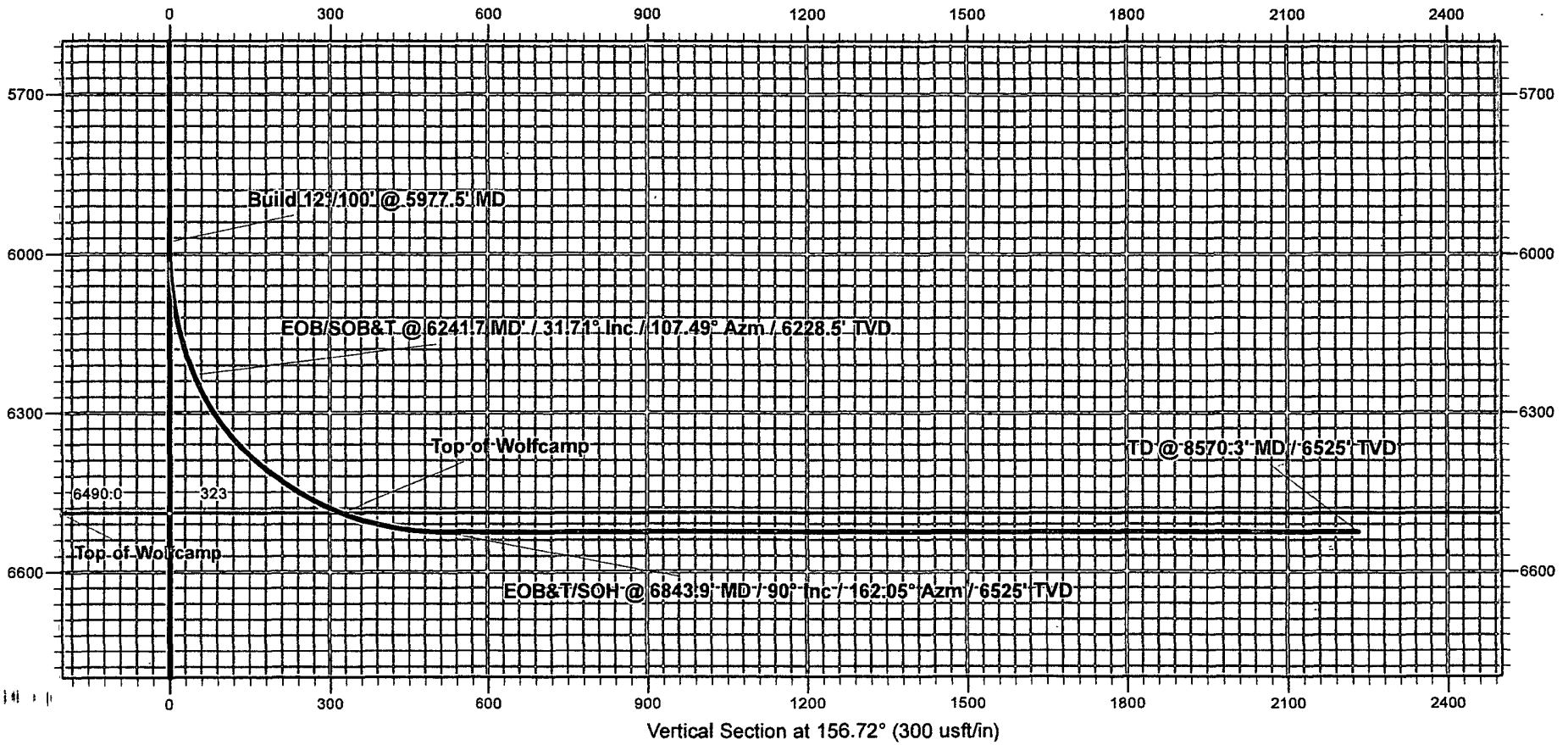
9. Downhole Conditions:

No abnormal conditions, pressures, temperatures, or H2S are expected. An H2S contingency plan is included in this Application as a precaution. The expected bottom hole temperature and pressure are 115 F and 2900 psi, respectively.

RSC RESOURCES, L.P.

Eddy, County NM
Sec 30, T16S, R28E
Crow Flats A Fed #2H
Quote 110xxx

The DIRECTIONAL DRILLING COMPANY



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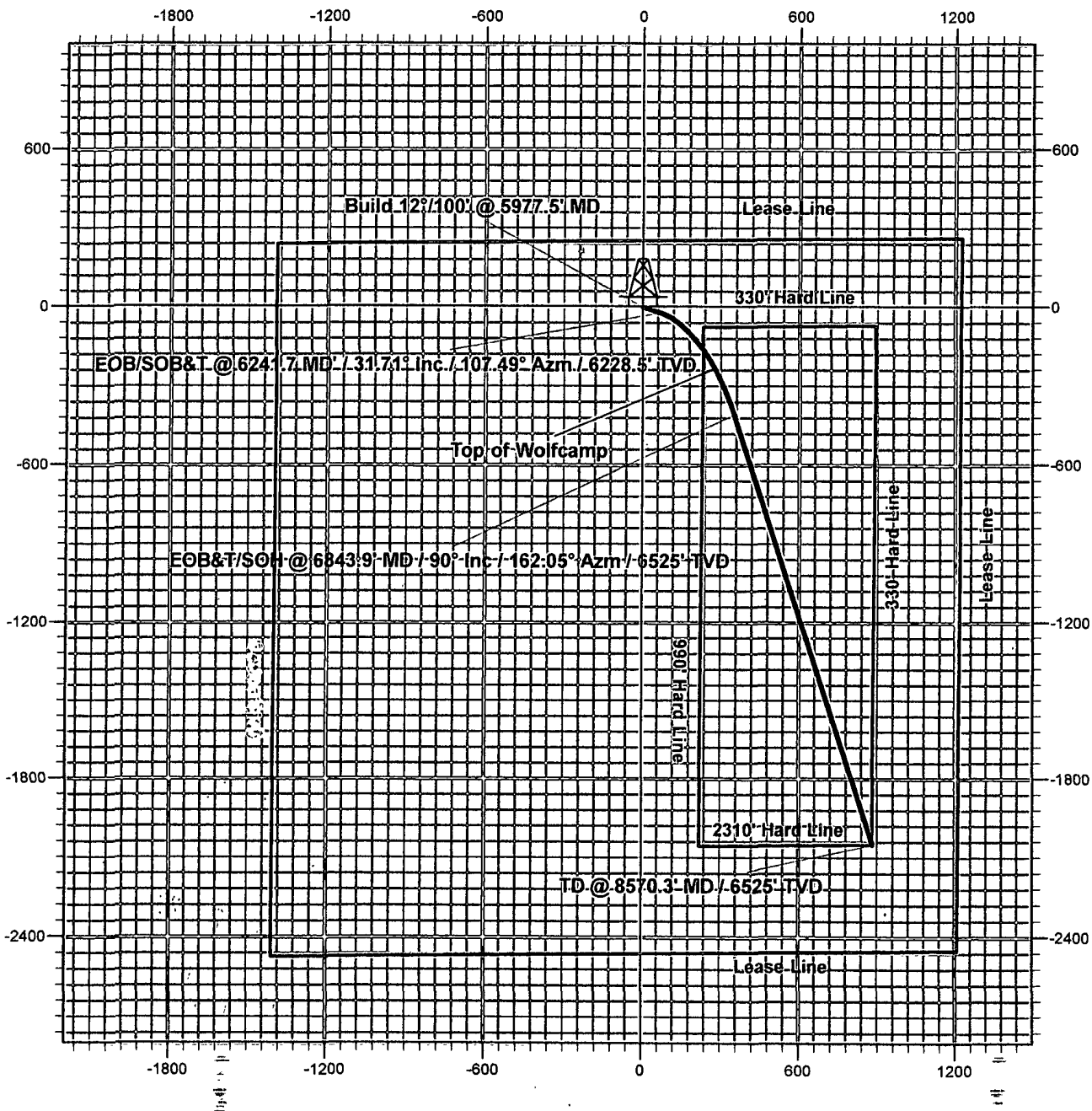

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Site Sec 30, T16S, R28E
Company:	RSC Resources, Lp	**TVD Reference:**	WELL @ 3545.9usft (Original Well Elev)
Project:	Eddy, County NM	**MD Reference:**	WELL @ 3545.9usft (Original Well Elev)
Site:	Sec 30, T16S, R28E	**North Reference:**	Grid
Well:	Crow Flats A Fed #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy, County NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sec 30, T16S, R28E				
Site Position:		**Northing:**	690,951.61 usft	**Latitude:**	32° 53' 58.000 N
From:	Lat/Long	**Easting:**	537,854.78 usft	**Longitude:**	104° 12' 36.000 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.07 °

Well	Crow Flats A Fed #2H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	690,951.61 usft	**Latitude:**	32° 53' 58.000 N
	+E/-W	0.0 usft	**Easting:**	537,854.78 usft	**Longitude:**	104° 12' 36.000 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,545.9 usft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	10/3/2011	7.90	60.69	48,920

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	156.72	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,977.5	0.00	0.00	5,977.5	0.0	0.0	0.00	0.00	0.00	0.00	
6,241.7	31.71	107.49	6,228.5	-21.4	68.0	12.00	12.00	0.00	107.49	
6,843.9	90.00	162.05	6,525.0	-408.0	350.1	12.00	9.68	9.06	58.81	
8,570.3	90.00	162.05	6,525.0	-2,050.5	882.1	0.00	0.00	0.00	0.00	PBHL Crow Flats A F

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Site:	Sec 30, T16S, R28E	**North Reference:**	Grid
Well:	Crow Flats A Fed #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
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2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
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2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Site Sec 30, T16S, R28E
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Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 12°/100' @ 5977.5' MD									
5,977.5	0.00	0.00	5,977.5	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	2.70	107.49	6,000.0	-0.2	0.5	0.3	12.00	12.00	0.00
6,025.0	5.70	107.49	6,024.9	-0.7	2.3	1.5	12.00	12.00	0.00
6,050.0	8.70	107.49	6,049.7	-1.7	5.2	3.6	12.00	12.00	0.00
6,075.0	11.70	107.49	6,074.3	-3.0	9.5	6.5	12.00	12.00	0.00
6,100.0	14.70	107.49	6,098.7	-4.7	14.9	10.2	12.00	12.00	0.00
6,125.0	17.70	107.49	6,122.7	-6.8	21.6	14.8	12.00	12.00	0.00
6,150.0	20.70	107.49	6,146.3	-9.3	29.4	20.1	12.00	12.00	0.00
6,175.0	23.70	107.49	6,169.4	-12.1	38.4	26.3	12.00	12.00	0.00
6,200.0	26.70	107.49	6,192.0	-15.3	48.6	33.2	12.00	12.00	0.00
6,225.0	29.70	107.49	6,214.1	-18.9	59.8	41.0	12.00	12.00	0.00
EOB/SOB&T @ 6241.7' MD / 31.71° Inc / 107.49° Azm / 6228.5' TVD									
6,241.7	31.71	107.49	6,228.5	-21.4	68.0	46.5	12.00	12.00	0.00
6,250.0	32.23	109.08	6,235.5	-22.8	72.1	49.4	12.00	6.34	19.25
6,275.0	33.93	113.61	6,256.4	-27.8	84.8	59.0	12.00	6.79	18.13
6,300.0	35.78	117.75	6,276.9	-34.0	97.7	69.8	12.00	7.40	16.54
6,325.0	37.76	121.52	6,297.0	-41.4	110.7	81.7	12.00	7.91	15.07
6,350.0	39.85	124.95	6,316.4	-50.0	123.8	94.8	12.00	8.35	13.75
6,375.0	42.03	128.10	6,335.3	-59.7	136.9	109.0	12.00	8.72	12.58
6,400.0	44.29	130.98	6,353.6	-70.6	150.1	124.2	12.00	9.04	11.54
6,425.0	46.61	133.64	6,371.1	-82.6	163.3	140.4	12.00	9.31	10.63
6,450.0	49.00	136.10	6,387.9	-95.7	176.4	157.6	12.00	9.54	9.84
6,475.0	51.43	138.39	6,403.9	-109.8	189.4	175.7	12.00	9.73	9.14
6,500.0	53.91	140.52	6,419.1	-124.9	202.3	194.7	12.00	9.90	8.54
6,525.0	56.41	142.52	6,433.3	-141.0	215.1	214.5	12.00	10.04	8.01
6,550.0	58.95	144.41	6,446.7	-157.9	227.7	235.0	12.00	10.16	7.56
6,575.0	61.52	146.20	6,459.1	-175.8	240.0	256.3	12.00	10.26	7.16
6,600.0	64.11	147.91	6,470.5	-194.4	252.1	278.2	12.00	10.35	6.82
6,625.0	66.72	149.54	6,480.9	-213.9	263.9	300.8	12.00	10.43	6.53
Top of Wolfcamp - Top of Wolfcamp									
6,649.2	69.26	151.06	6,490.0	-233.3	275.0	323.0	12.00	10.49	6.28
6,650.0	69.34	151.11	6,490.3	-234.0	275.4	323.8	12.00	10.52	6.17
6,675.0	71.98	152.63	6,498.6	-254.8	286.5	347.3	12.00	10.55	6.06
6,700.0	74.63	154.10	6,505.7	-276.2	297.2	371.2	12.00	10.60	5.88
6,725.0	77.28	155.53	6,511.8	-298.2	307.6	395.4	12.00	10.63	5.73
6,750.0	79.95	156.93	6,516.7	-320.6	317.4	419.9	12.00	10.66	5.62
6,775.0	82.62	158.31	6,520.5	-343.4	326.8	444.6	12.00	10.69	5.52
6,800.0	85.30	159.68	6,523.2	-366.6	335.7	469.5	12.00	10.70	5.46
6,825.0	87.98	161.03	6,524.6	-390.1	344.1	494.4	12.00	10.71	5.42
EOB&T/SOH @ 6843.9' MD / 90° Inc / 162.05° Azm / 6525' TVD									
6,843.9	90.00	162.05	6,525.0	-408.1	350.1	513.2	11.98	10.70	5.39
6,900.0	90.00	162.05	6,525.0	-461.4	367.4	569.1	0.00	0.00	0.00
7,000.0	90.00	162.05	6,525.0	-556.6	398.2	668.6	0.00	0.00	0.00
7,100.0	90.00	162.05	6,525.0	-651.7	429.0	768.2	0.00	0.00	0.00
7,200.0	90.00	162.05	6,525.0	-746.8	459.8	867.8	0.00	0.00	0.00
7,300.0	90.00	162.05	6,525.0	-842.0	490.7	967.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Site Sec 30, T16S, R28E
Company:	RSC Resources, Lp	**TVD Reference:**	WELL @ 3545.9usft (Original Well Elev)
Project:	Eddy, County NM	**MD Reference:**	WELL @ 3545.9usft (Original Well Elev)
Site:	Sec 30, T16S, R28E	**North Reference:**	Grid
Well:	Crow Flats A Fed #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,400.0	90.00	162.05	6,525.0	-937.1	521.5	1,066.9	0.00	0.00	0.00
7,500.0	90.00	162.05	6,525.0	-1,032.2	552.3	1,166.5	0.00	0.00	0.00
7,600.0	90.00	162.05	6,525.0	-1,127.4	583.1	1,266.0	0.00	0.00	0.00
7,700.0	90.00	162.05	6,525.0	-1,222.5	613.9	1,365.6	0.00	0.00	0.00
7,800.0	90.00	162.05	6,525.0	-1,317.6	644.7	1,465.2	0.00	0.00	0.00
7,900.0	90.00	162.05	6,525.0	-1,412.8	675.6	1,564.7	0.00	0.00	0.00
8,000.0	90.00	162.05	6,525.0	-1,507.9	706.4	1,664.3	0.00	0.00	0.00
8,100.0	90.00	162.05	6,525.0	-1,603.0	737.2	1,763.9	0.00	0.00	0.00
8,200.0	90.00	162.05	6,525.0	-1,698.2	768.0	1,863.4	0.00	0.00	0.00
8,300.0	90.00	162.05	6,525.0	-1,793.3	798.8	1,963.0	0.00	0.00	0.00
8,400.0	90.00	162.05	6,525.0	-1,888.4	829.6	2,062.6	0.00	0.00	0.00
8,500.0	90.00	162.05	6,525.0	-1,983.6	860.5	2,162.2	0.00	0.00	0.00
TD @ 8570.3' MD / 6525' TVD									
8,570.3	90.00	162.05	6,525.0	-2,050.4	882.1	2,232.1	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Crow Flats A Fed - plan hits target center - Point	0.00	0.00	6,525.0	-2,050.5	882.1	688,901.16	538,736.91	32° 53' 37.700 N	104° 12' 25.682 W

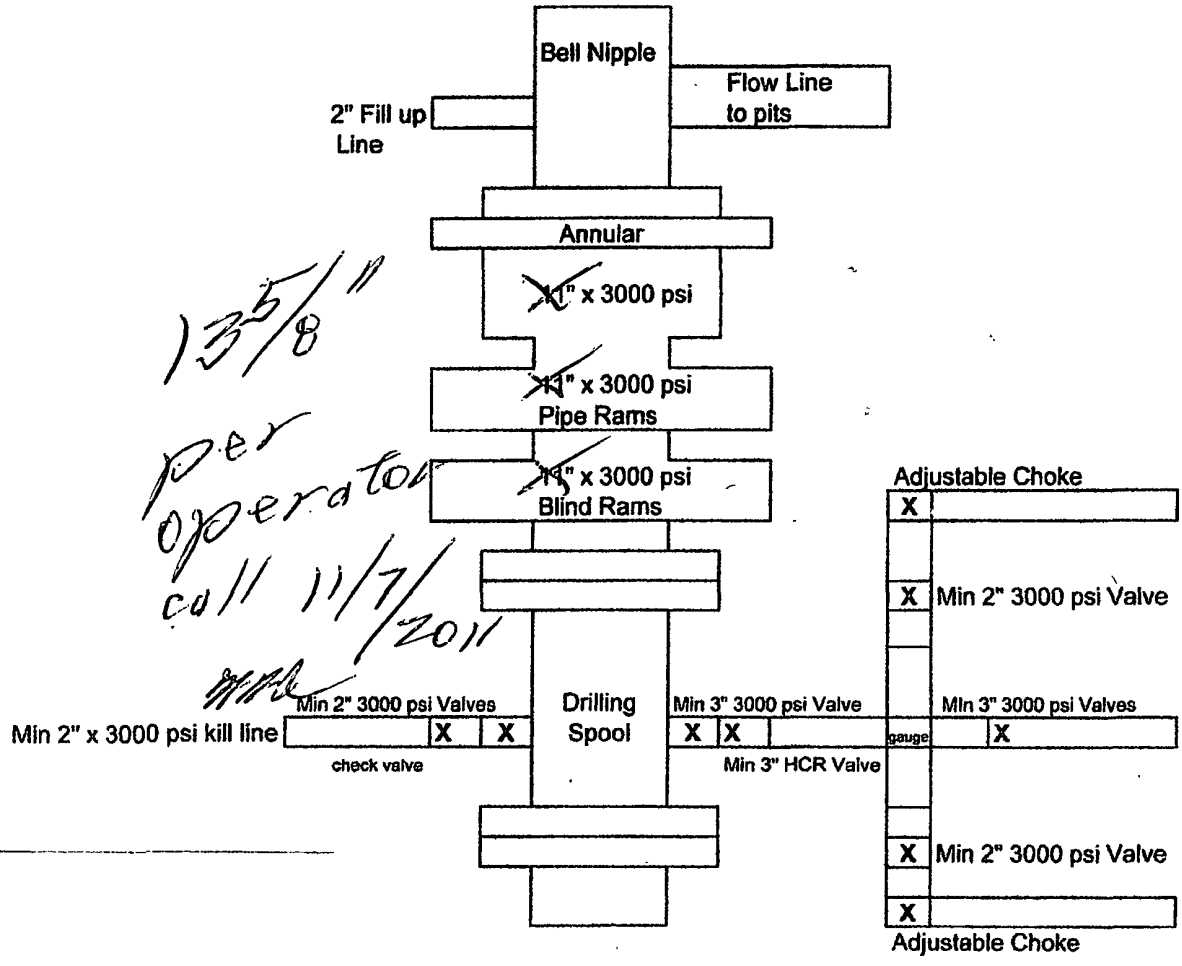
Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,649.2	6,490.0	Top of Wolfcamp		0.00	156.72

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5,977.5	5,977.5	0.0	0.0	Build 12°/100' @ 5977.5' MD
6,241.7	6,228.5	-21.4	68.0	EOB/SOB&T @ 6241.7 MD' / 31.71° Inc / 107.49° Azm / 6228.5' TVD
6,649.2	6,490.0	-233.3	275.0	Top of Wolfcamp
6,843.9	6,525.0	-408.1	350.1	EOB&T/SOH @ 6843.9' MD / 90° Inc / 162.05° Azm / 6525' TVD
8,570.3	6,525.0	-2,050.4	882.1	TD @ 8570.3' MD / 6525' TVD

BOP Schematic for



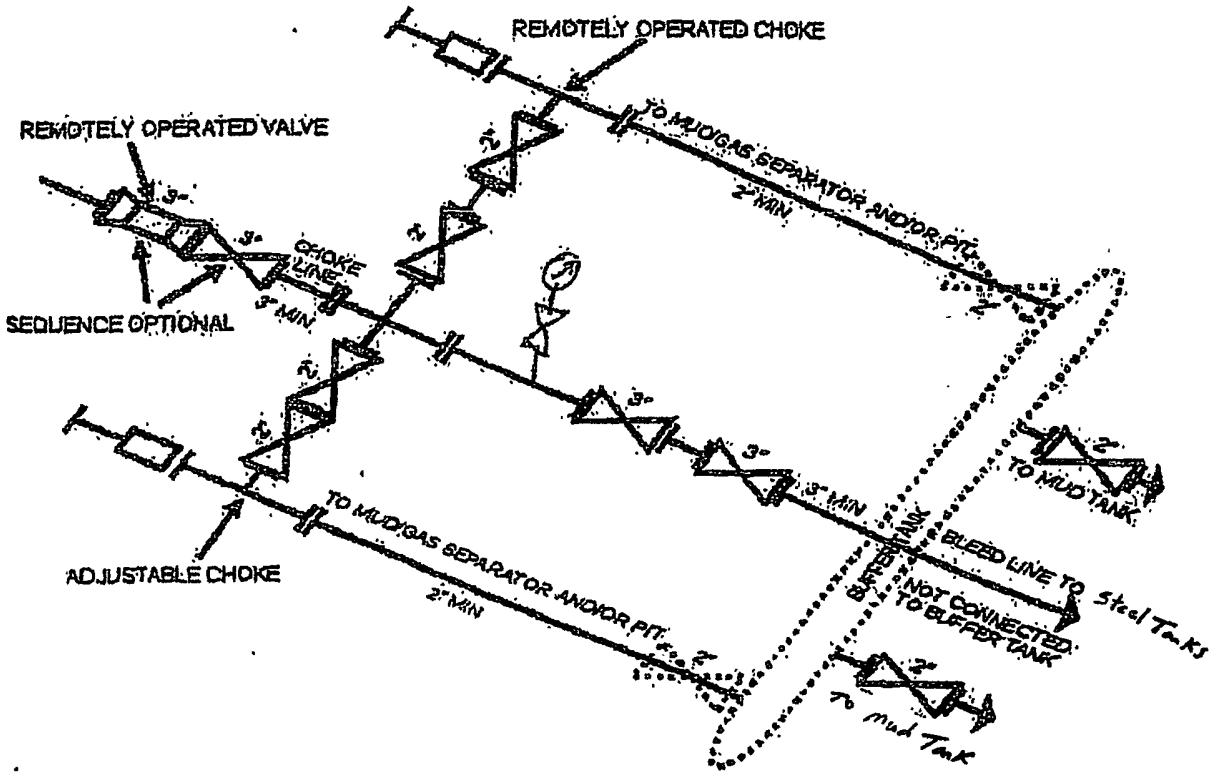
13 5/8" per operator call 11/7/2011 MHE

RSC Resources Limited Partnership

Crow Flats A Federal No. 2H

ABC Resources Limited Partnership

WELL NAME: Crow Flats A Federal No. 2H

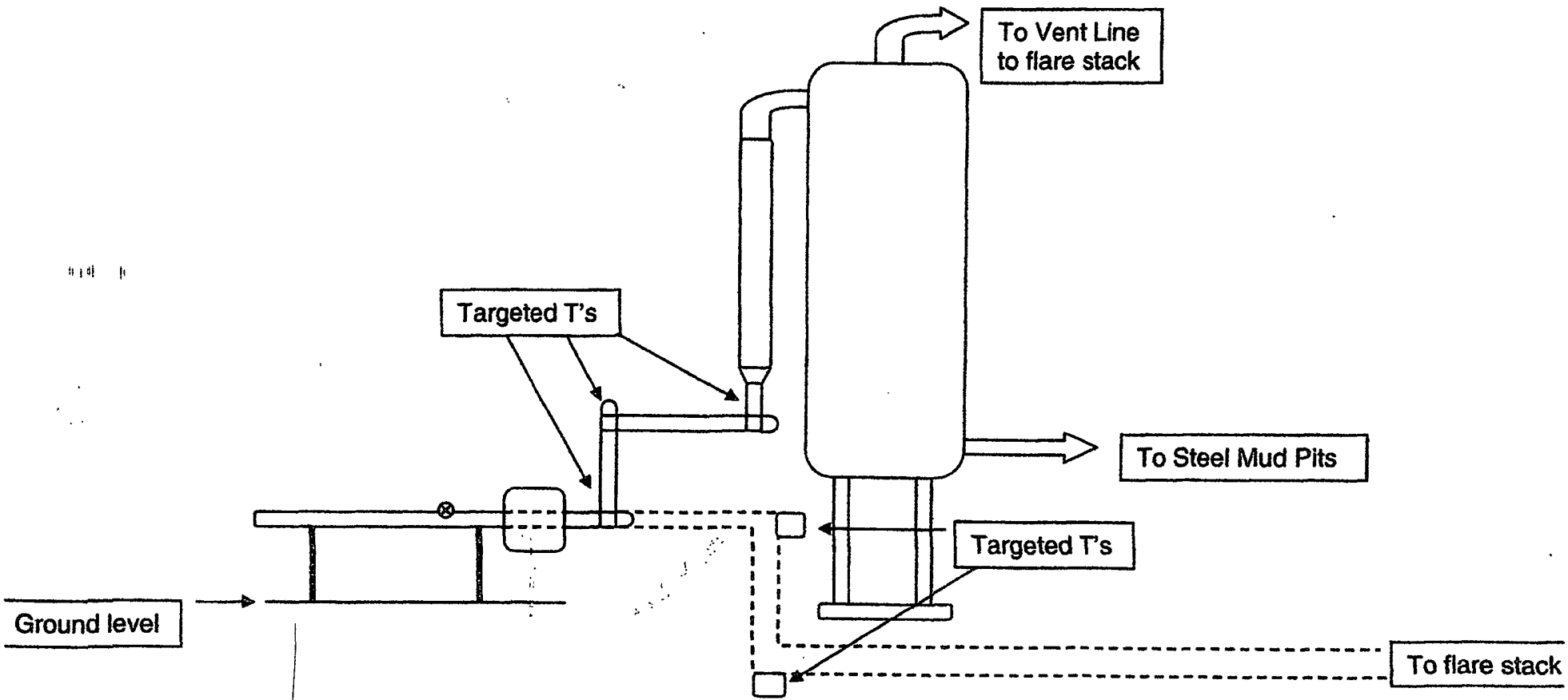


CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

Profile View of Piping from Choke Manifold to the Mud Gas Separator



Notes Regarding Blowout Preventer

Crow Flats A Federal 2H
250' FNL & 1220' FEL
Sec. 30-T16S-R28E, Eddy, NM

I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.

II. Blowout preventer and all fittings must be in good condition with a *minimum 5000 PSI working pressure.*

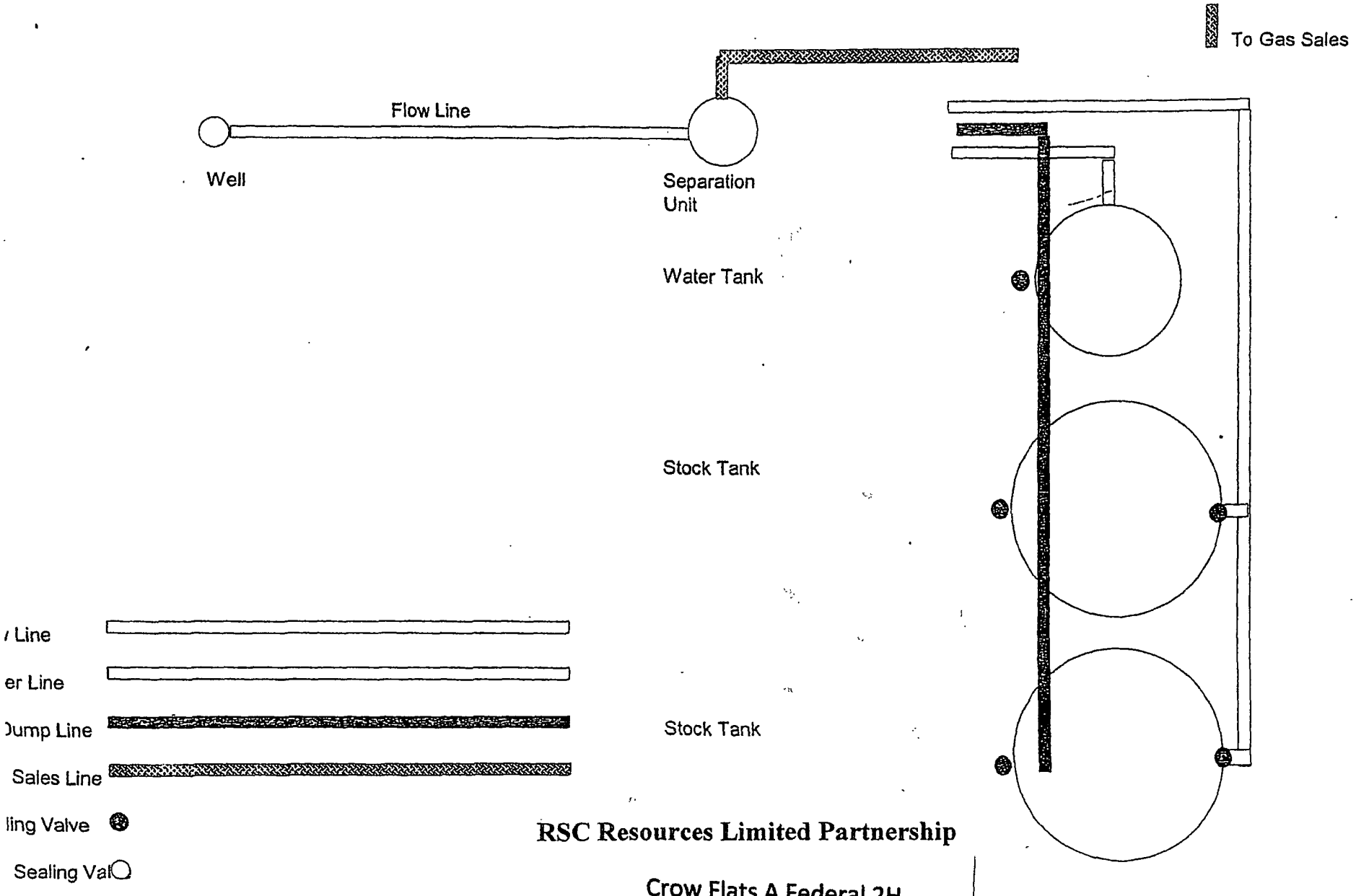
III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 5000 PSI working pressure.

IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.

V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.

Proposed Production Facilities Schematic



RSC Resources Limited Partnership

Crow Flats A Federal 2H
250' FNL & 1220' FEL
Sec. 30-T16S-R28E, Eddy, NM

RSC Resources Limited Partnership

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

A. The hazards and characteristics of hydrogen sulfide (H_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

A. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

C. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

A. Well Control Equipment:

Flare line.

Choke manifold.

Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. H_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

E. Mud Program:

The mud program has been designed to minimize the volume of H_2S circulated to the surface.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

G. Communication:

Company vehicles equipped with cellular telephone and 2-way radio.

WARNING

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH*** RSC RESOURCES, L.P. ***MAIN OFFICE***

RSC Resources Limited Partnership

1-432-553-1849

Emergency Phone Numbers

Eddy County Sheriff's Office		575-746-9888
Ambulance Service		911 or 575-746-5051
Artesia Fire Dept		911 or 575-746-5051
Loco Hills Volunteer Fire Dept.		911 or 575-677-3266
Closest Medical Facility	**Artesia General Hospital**	575-748-3333
New Mexico State Police		575-746-2703

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RSC Resources LTP
LEASE NO.:	NM54856
WELL NAME & NO.:	2H Crow Flats A Federal
SURFACE HOLE FOOTAGE:	250' FNL & 1220' FEL
BOTTOM HOLE FOOTAGE	2310' FNL & 330' FEL
LOCATION:	Section 30, T.16 S., R.28 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)

Limit northern and western pad construction to avoid large drainage to the NW by 20'. Create no surface disturbance within 20' of drainage.

Cave and Karst

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

Cave/Karst Surface Mitigation

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

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

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

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

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

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, 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) 234-6235 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 in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 3 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

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

Payment shall be made to the BLM prior to removal of any federal mineral materials. 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 twenty (20) 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.

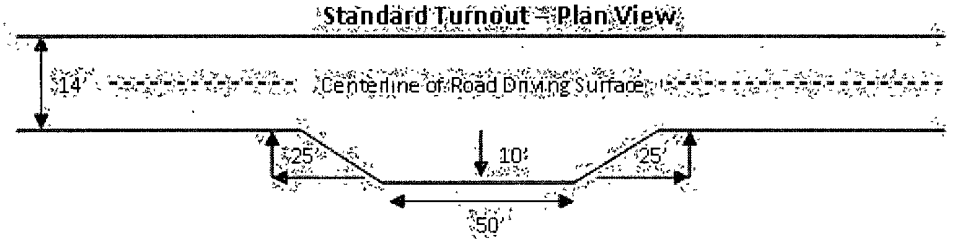
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

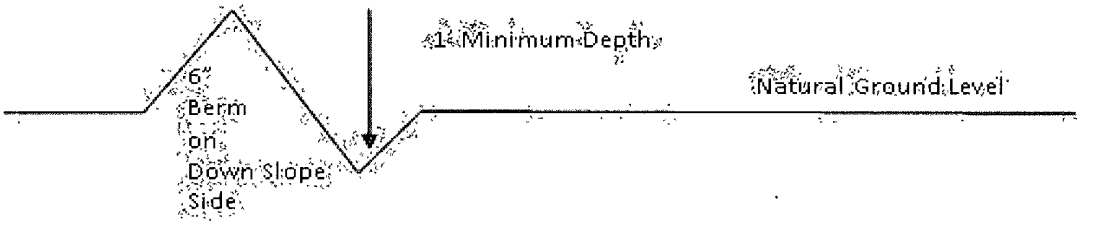
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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:

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

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

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

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

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

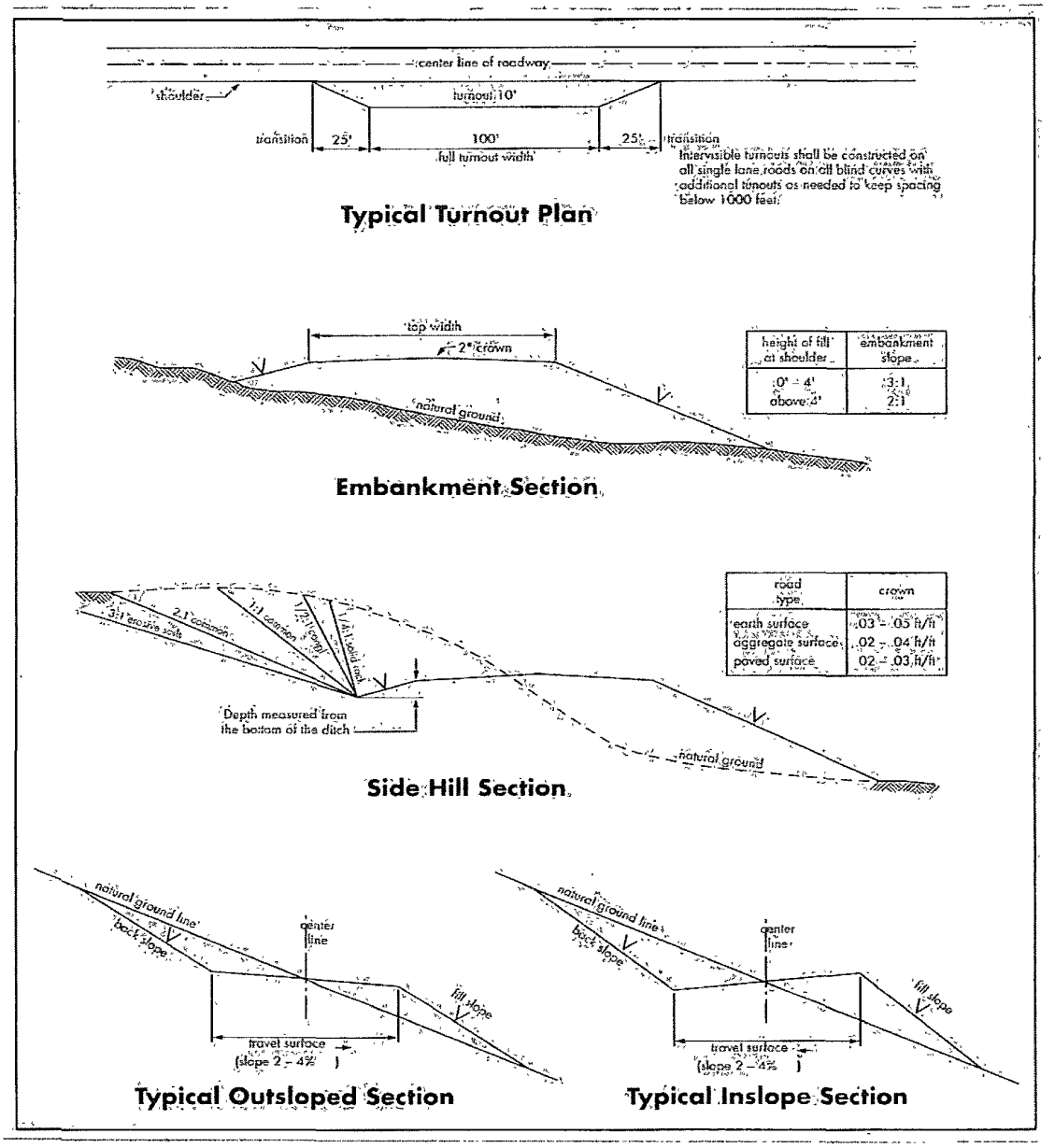
Fence Requirement

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

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

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 Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall 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.**

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 prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

HIGH CAVE/KARST
Possible lost circulation in the Grayburg and San Andres.

1. The **13-3/8** inch surface casing shall be set at approximately **500 feet** and cemented to the surface.

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

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

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

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

HIGH CAVE/KARST – CONTINGENCY CASING WILL BE REQUIRED IF LOST CIRCULATION OCCURS WHILE DRILLING THE 8.75 INCH HOLE. THE INTERMEDIATE HOLE WILL HAVE TO BE REAMED AND A LARGER CASING INSTALLED.

Contingency Intermediate Casing:

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.**

3. The minimum required fill of cement behind the **7** inch production casing is:

   ☒ Cement as proposed. Operator shall provide method of verification.
   Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

4. Cement not required on the **4-1/2"** liner. **Packer system being used.**

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

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

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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

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

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

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

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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

IX. INTERIM RECLAMATION

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

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

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

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Seed Mixture 4, for Gypsum 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
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0

DWS: DeWinged Seed

*Pounds of pure live seed:

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