

In Lieu of
Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other	5. Lease Designation and Serial No. SF - 078762
2. Name of Operator Williams Production Company, LLC	6. If Indian, Allottee or Tribe Name
3. Address and Telephone No. C/O Walsh Engineering & Production Corp. 7415 East Main, Farmington, NM 87402 505-327-4892	7. If Unit or CA, Agreement Designation Rosa
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 970' FSL & 1640' FWL Sec 13, T31N, R5W	8. Well Name and No. Rosa #371
	9. API Well No. 30-039-27239
	10. Field and Pool, or Exploratory Area Basin Fruitland Coal
	11. County or Parish, State Rio Arriba, NM

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
☐ Notice of Intent	☐ Abandonment
☒ Subsequent Report	☐ Recompletion
☐ Final Abandonment	☐ Plugging Back
	☐ Casing Repair
	☐ Altering Casing
	☐ Other <u>See Below</u>
	☒ Change of Plans
	☐ New Construction
	☐ Non-Routine Fracturing
	☐ Water Shut-Off
	☐ Conversion to Injection
	☐ Dispose Water
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Williams Production Company, LLC intends to construct the Rosa #371 as a horizontal coal well as per the attached operations/directional plan. The bottom hole location at TD is planned to be 2954.74' FNL & 2460.85' FWL.

Attached: Operations Plan

Directional Plan

Well Bore Schematic

14. I hereby certify that the foregoing is true and correct

Signed

[Signature]

(John C. Thompson)

Title

Agent/Engineer

Date

08/16/02

(This space for Federal or State office use)

Approved by

/s/ Jim Lovato

Title

Date

8/16/02

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes 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.

*See Instruction on Reverse Side

NMOCD

HOLD FOR dir. Survey



WILLIAMS PRODUCTION COMPANY

Operations Plan

(Note: This procedure will be adjusted on site based upon actual conditions)

DATE: 8/16/2002

WELLNAME: Rosa #371 **FIELD:** Basin Fruitland Coal

LOCATION: SE/4 SW/4 Sec. 13, T31N, R5W **SURFACE:** Forest
Rio Arriba, NM

ELEVATION: 6530' GR **MINERALS:** Fed

TOTAL DEPTH: 3360' **LEASE #** SF-078762

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB) Tops are estimates only. Logs will determine true depths.

	TVD	MD
Ojo Alamo	2720'	2720'
Kirtland	2845'	2845'
Fruitland	3125'	3125'
Top of Coal	3250'	3250'
Base of Coal	3360'	3360'
Pictured Cliffs	3360'	3360'
Vertical section TD	3460'	3460
Horizontal Section Depth	3343'	5638'

*** Note:** Well will be vertically drilled to 100' into Picture Cliff, logged through the PC, plug the PC then pull up and horizontally drill through the coal.

B. LOGGING PROGRAM: High Resolution SDL from TD to intermediate casing; DSN from TD to surface casing. Mud logger will be present to determine TD.

C. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: Clear water with benex to 7" casing point. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before 3125' DO NOT drill deeper until Engineering is contacted.

B. Drilling Fluid: Horizontal Coal section will be drilled with Fruitland Coal water.

C. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the rams will be tested to 1500 psi. The surface and intermediate casing strings will be pressured tested in conjunction with the BOP test before drilling out cement. The drum brakes will be inspected and tested each tour. All tests, inspections and SPR's will be recorded in the tour book as to time and results.

III. MATERIALS

A. CASING PROGRAM:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3802' MD	7"	20# K-55
Prod. Liner	6-1/4"	2430 – 5492 MD	4-1/2"	10.5# K-55

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe.
2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self- fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 1585' to the surface. Total centralizers = 5 regular and 14 turbulent.
3. PRODUCTION LINER: 4-1/2"liner with notched collar on bottom. The liner will be slotted in the open hole section.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. SURFACE: Use 130 sx (188 cu.ft.) of "Type III" with 2% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.
2. INTERMEDIATE: Lead - 365 sx (762 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl₂ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 150 sx (209cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl₂ (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use 100% excess in lead and tail to circulate to surface. Total volume = 971 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated. Test to 1500#.
3. PRODUCTION LINER: Open hole completion. No cement.

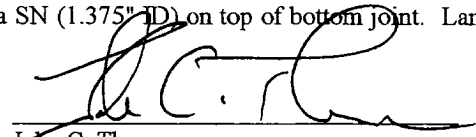
IV COMPLETION

A. STIMULATION

None expected

C. RUNNING TUBING

1. Fruitland Coal: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing approximately 3400'



John C. Thompson
Engineer, Production & Drilling

file:371RosaOP



Williams Production Company
New Mexico
Rio Arriba County
Rosa Unit # 371 - Plan 08/07/02

Sperry-Sun

Proposal Report

7 August, 2002

Data Source: Information from Gary Sizemore

Proposal Ref: pro5830

HALLIBURTON

Proposal Report for Rosa Unit # 371 - Plan 08/07/02
Data Source: Information from Gary Sizemore

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
2530.00	0.000	0.000	2530.00	0.00 N	0.00 E	0.00	0.00
2540.00	0.707	337.000	2540.00	0.06 N	0.02 W	0.06	7.07
2560.00	2.122	337.000	2559.99	0.51 N	0.22 W	0.56	7.07
2580.00	3.537	337.000	2579.97	1.42 N	0.60 W	1.54	7.07
2600.00	4.951	337.000	2599.91	2.78 N	1.18 W	3.02	7.07
2620.00	6.366	337.000	2619.81	4.60 N	1.95 W	4.99	7.07
2640.00	7.781	337.000	2639.66	6.86 N	2.91 W	7.46	7.07
2660.00	9.196	337.000	2659.44	9.58 N	4.07 W	10.41	7.07
2680.00	10.610	337.000	2679.14	12.75 N	5.41 W	13.85	7.07
2700.00	12.025	337.000	2698.75	16.36 N	6.94 W	17.77	7.07
2720.00	13.440	337.000	2718.26	20.42 N	8.67 W	22.18	7.07
2740.00	14.854	337.000	2737.66	24.92 N	10.58 W	27.07	7.07
2760.00	16.269	337.000	2756.92	29.86 N	12.67 W	32.44	7.07
2780.00	17.684	337.000	2776.05	35.23 N	14.96 W	38.27	7.07
2800.00	19.099	337.000	2795.03	41.04 N	17.42 W	44.58	7.07
2820.00	20.513	337.000	2813.84	47.28 N	20.07 W	51.36	7.07
2840.00	21.928	337.000	2832.49	53.94 N	22.90 W	58.60	7.07
2860.00	23.343	337.000	2850.95	61.03 N	25.90 W	66.30	7.07
2880.00	24.757	337.000	2869.21	68.53 N	29.09 W	74.45	7.07
2900.00	26.172	337.000	2887.27	76.45 N	32.45 W	83.05	7.07
2920.00	27.587	337.000	2905.11	84.77 N	35.98 W	92.09	7.07
2940.00	29.002	337.000	2922.72	93.49 N	39.69 W	101.57	7.07
2960.00	30.416	337.000	2940.09	102.62 N	43.56 W	111.48	7.07
2980.00	31.831	337.000	2957.21	112.13 N	47.60 W	121.82	7.07
3000.00	33.246	337.000	2974.07	122.04 N	51.80 W	132.57	7.07
3020.00	34.660	337.000	2990.66	132.32 N	56.17 W	143.74	7.07
3040.00	36.075	337.000	3006.96	142.97 N	60.69 W	155.32	7.07
3060.00	37.490	337.000	3022.98	154.00 N	65.37 W	167.30	7.07
3080.00	38.905	337.000	3038.70	165.38 N	70.20 W	179.66	7.07
3100.00	40.319	337.000	3054.11	177.12 N	75.18 W	192.41	7.07
3120.00	41.734	337.000	3069.19	189.20 N	80.31 W	205.54	7.07
3140.00	43.149	337.000	3083.95	201.63 N	85.59 W	219.04	7.07
3160.00	44.563	337.000	3098.38	214.38 N	91.00 W	232.90	7.07
3180.00	45.978	337.000	3112.45	227.46 N	96.55 W	247.10	7.07
3200.00	47.393	337.000	3126.17	240.86 N	102.24 W	261.66	7.07
3220.00	48.808	337.000	3139.53	254.56 N	108.05 W	276.54	7.07
3240.00	50.222	337.000	3152.51	268.56 N	114.00 W	291.75	7.07
3260.00	51.637	337.000	3165.12	282.85 N	120.06 W	307.28	7.07
3280.00	53.052	337.000	3177.33	297.43 N	126.25 W	323.11	7.07
3300.00	54.466	337.000	3189.16	312.28 N	132.55 W	339.24	7.07
3320.00	55.881	337.000	3200.58	327.39 N	138.97 W	355.66	7.07
3340.00	57.296	337.000	3211.59	342.75 N	145.49 W	372.36	7.07
3360.00	58.710	337.000	3222.19	358.37 N	152.12 W	389.32	7.07
3380.00	60.125	337.000	3232.36	374.22 N	158.85 W	406.53	7.07

HALLIBURTON

Williams Production Company
New Mexico
Rio Arriba County

Proposal Report for Rosa Unit # 371 - Plan 08/07/02 Data Source: Information from Gary Sizemore

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
3400.00	61.540	337.000	3242.11	390.29 N	165.67 W	424.00	7.07
3420.00	62.955	337.000	3251.42	406.58 N	172.58 W	441.70	7.07
3440.00	64.369	337.000	3260.30	423.08 N	179.59 W	459.62	7.07
3460.00	65.784	337.000	3268.72	439.78 N	186.67 W	477.76	7.07
3480.00	67.199	337.000	3276.70	456.66 N	193.84 W	496.10	7.07
3500.00	68.613	337.000	3284.22	473.72 N	201.08 W	514.63	7.07
3520.00	70.028	337.000	3291.29	490.94 N	208.39 W	533.34	7.07
3540.00	71.443	337.000	3297.89	508.32 N	215.77 W	552.22	7.07
3560.00	72.858	337.000	3304.02	525.84 N	223.21 W	571.25	7.07
3580.00	74.272	337.000	3309.67	543.50 N	230.70 W	590.44	7.07
3600.00	75.687	337.000	3314.86	561.28 N	238.25 W	609.75	7.07
3620.00	77.102	337.000	3319.56	579.17 N	245.84 W	629.19	7.07
3640.00	78.516	337.000	3323.79	597.17 N	253.48 W	648.74	7.07
3660.00	79.931	337.000	3327.52	615.25 N	261.16 W	668.39	7.07
3680.00	81.346	337.000	3330.78	633.42 N	268.87 W	688.12	7.07
3700.00	82.761	337.000	3333.54	651.65 N	276.61 W	707.93	7.07
3720.00	84.175	337.000	3335.82	669.94 N	284.37 W	727.80	7.07
3740.00	85.590	337.000	3337.60	688.28 N	292.16 W	747.72	7.07
3760.00	87.005	337.000	3338.89	706.65 N	299.95 W	767.67	7.07
3780.00	88.419	337.000	3339.69	725.04 N	307.76 W	787.66	7.07
3800.00	89.834	337.000	3340.00	743.45 N	315.58 W	807.65	7.07
3802.35	90.000	337.000	3340.00	745.61 N	316.49 W	810.00	7.07
4000.00	90.000	337.000	3340.00	927.55 N	393.72 W	1007.65	0.00
4500.00	90.000	337.000	3340.00	1387.80 N	589.09 W	1507.65	0.00
5000.00	90.000	337.000	3340.00	1848.06 N	784.45 W	2007.65	0.00
5492.35	90.000	337.000	3340.00	2301.26 N	976.83 W	2500.00	0.00

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to True North. Vertical depths are relative to RKB. Northings and Eastings are relative to 970' FSL / 1640' FWL.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from 970' FSL / 1640' FWL and calculated along an Azimuth of 337.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 5492.35ft.,
The Bottom Hole Displacement is 2500.00ft., in the Direction of 337.000° (True).

Proposal Report for Rosa Unit # 371 - Plan 08/07/02
Data Source: Information from Gary Sizemore**Comments**

Measured Depth (ft)	TVD (ft)	Station Coordinates		Comment
		Northings (ft)	Eastings (ft)	
2530.00	2530.00	0.00 N	0.00 E	Kick-Off Point @ 2530' md
2530.01	2530.01	0.00 N	0.00 E	Build 7.0°/100' to 90° Inc & 337° Azm to 3802.35' md
3802.35	3340.00	745.61 N	316.49 W	EOC - Hold 90° Inc & 337° Azm to 5492.35' md
5492.35	3340.00	2301.26 N	976.83 W	TD of Well @ 5492.35' md & 3340' TVD (2500' Total Vertical Section)

Formation Tops

Formation Plane (Below Well Origin)			Profile Penetration Point					Formation Name
Sub-Sea (ft)	Dip Angle	Up-Dip Dirn.	Measured Depth (ft)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	
-3809.00	0.000	0.000	2722.82	2721.00	-3809.00	21.03 N	8.92 W	Ojo Alamo Ss
-3690.00	0.000	0.000	2848.11	2840.00	-3690.00	56.77 N	24.10 W	Kirtland Shale
-3401.00	0.000	0.000	3204.19	3129.00	-3401.00	243.70 N	103.44 W	Fruitland Fm
-3189.00	0.000	0.000						Top of Coal Interval
3348.00	0.000	0.000						Base of Coal Interval
3353.00	0.000	0.000						Upper Pictured Cliffs Ss

Targets associated with this wellpath

Target Name	Vertical/Horizontal Reference Origin	Target Entry Coordinates			Target Shape	Target Type
		TVD (ft)	Northings (ft)	Eastings (ft)		
Rosa Unit # 371 Perp to Cleat Direction	RKB/970' FSL / 1640' FWL:	0.00	0.00 N	0.00 E	Polygon	Current Tar
Rosa Unit 371 Cleat Direction	RKB/970' FSL / 1640' FWL:	0.00	0.00 N	0.00 E	Polygon	Current Tar

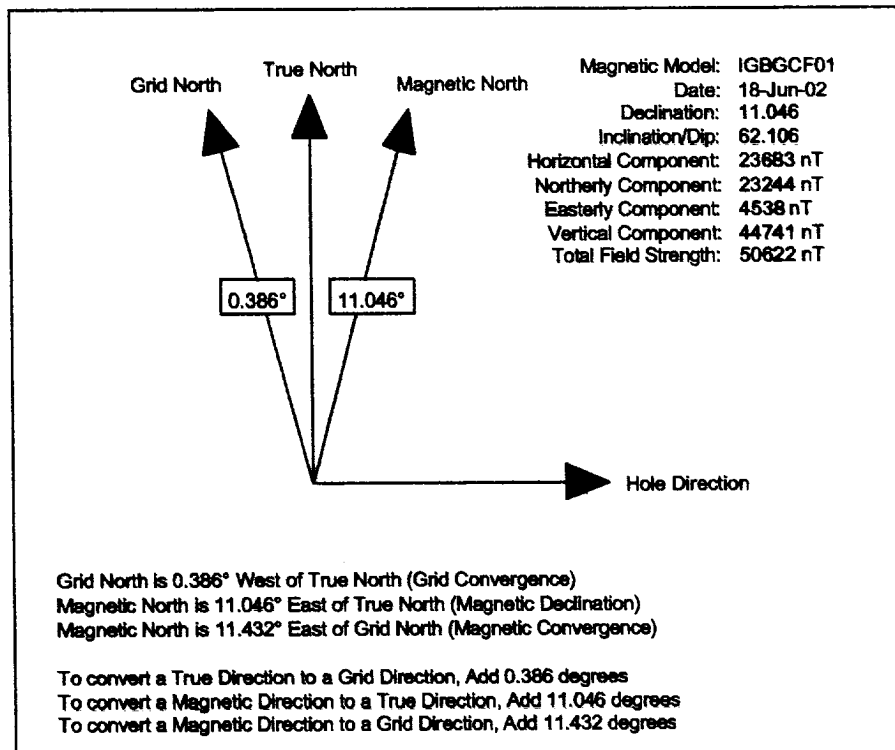
North Reference Sheet for Sec. 13-T31N-R6W - Rosa Unit # 371

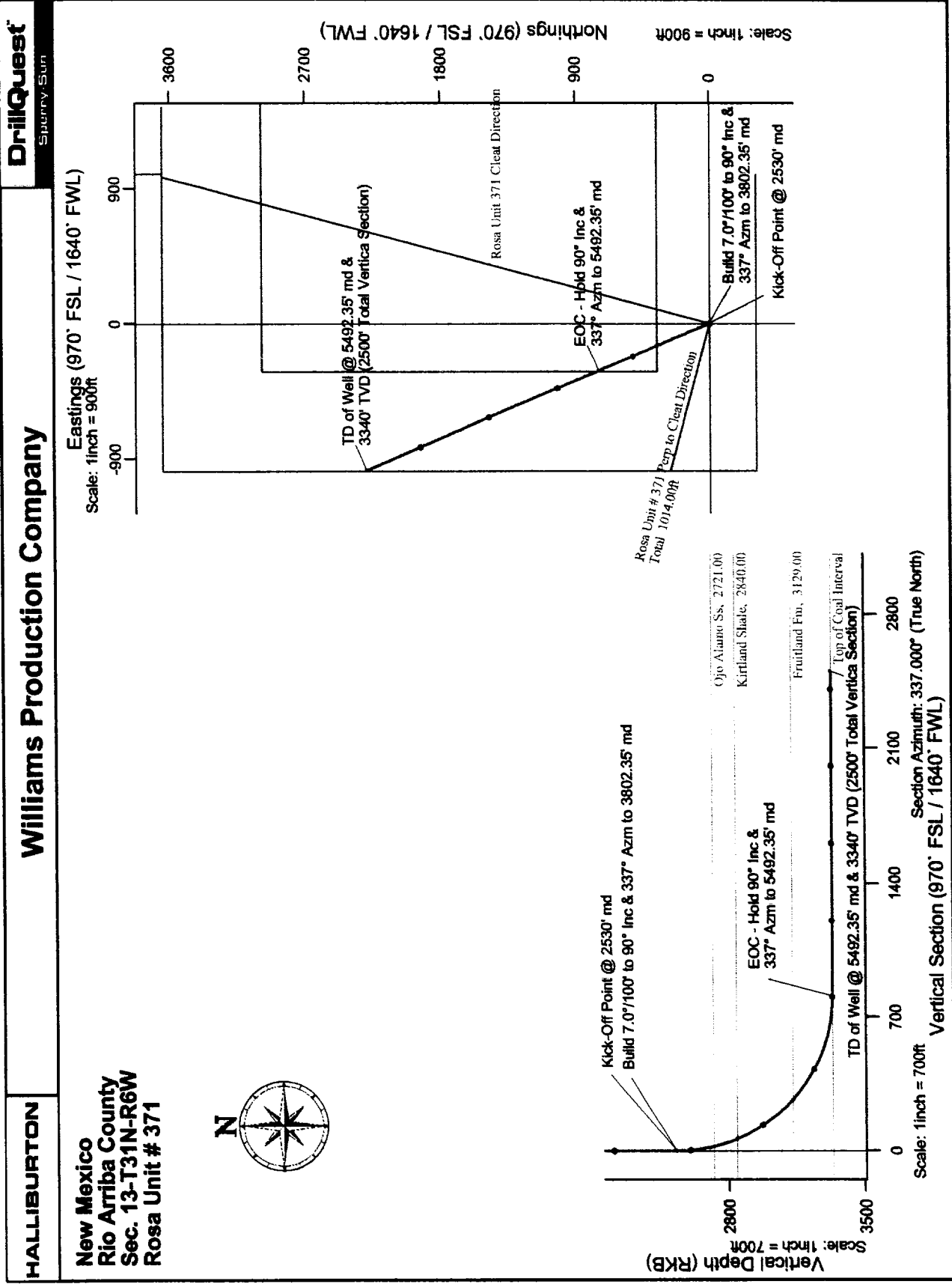
Coordinate System is NAD27 New Mexico State Planes, Western Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Projection method is Transverse Mercator or Gauss Kruger Projection
Central Meridian is -107.833°, Longitude Origin: 0.000°, Latitude Origin: 31.000°
False Easting: 500,000.000ft., False Northing: 0.000ft., Scale Reduction: 0.99991667

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)
Spheroid is Clarke - 1866, Equatorial Radius: 6,378,206.400m., Polar Radius: 6,356,583.800m.

Grid Coordinates of Well: 1505949.96 N, 299327.32 E
Geographical Coordinates of Well: 35° 08' 14.5940" N, 108° 30' 16.2539" W
Grid Convergence at Surface is -0.386°, Magnetic Declination at Surface is 11.046° (18 June, 2002)





Rosa Unit 371

030 Alms
2720' -

95/8, 36# K-55
@ ~ 250'

Top of Limestone
@ 2430'

START
BUILT @ 2530' MD

END BUILD
@3802 MD (3340 TUD)

4 1/2", 11.6 liter

@
5492' MD
3340' TVD

Top Coal
3250'

RECEIVED CIVIL
3360' —

7", 30#, K-55
@ ~3802' MD
3340' TVD)