

30-039- 29364

DATE IN 6/12/06	SUSPENSE 7-3-06	ENGINEER HEKESTOGNER	LOGGED IN 6/13/06	TYPE	APP NO. PTDS0616455573
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



Rosa Unit # 382

12 PM 4 08

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS
 WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify Horizontal Drilling

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ~~X~~ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

William F. Carr
 Print or Type Name

William F. Carr
 Signature

ATTORNEY
 Title

6-12-06
 Date

wcarr@hollandhart.com
 e-mail Address



June 12, 2006

HAND DELIVERED

Mark Fesmire, P.E.
Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
1220 Saint Francis Drive
Santa Fe, New Mexico 87505

Re: Application of Williams Production Company, L.L.C. for Administrative
Approval of Horizontal Drilling and an Unorthodox Surface and Bottomhole
Location in the Basin-Fruitland Coal Gas Pool, Rio Arriba County, New Mexico.
Rosa Unit Well No. 382

30-039-2936

Dear Mr. Fesmire:

Pursuant to the provisions of Division Rule 111.C(2) and Rules 8 and 9 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool, as promulgated by Division Order No. R-8768 dated October 17, 1988, Williams Production Company, L.L.C. hereby files its application for an administrative exception to the requirements of Rule 7 as amended by Division Order No. R-8768-B, effective February 10, 2000, for the drilling of its Rosa Unit Well No. 382 as an intentionally deviated horizontal wellbore on a standard coalbed methane gas spacing unit comprised of the E/2 of Section 12, Township 31 North, Range 5 West, NMPM, Rio Arriba County, New Mexico. This spacing unit will be the Project Area for this horizontal well.

Rule 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool provides that wells shall be located in the NE/4 or SW/4 of a single governmental section and shall be located no closer than 660 feet to any outer boundary of the spacing unit nor closer than 10 feet to any interior quarter or quarter-quarter section line.

The Rosa Unit Well No. 382 has been drilled by Williams Production Company as operator of the Rosa Unit. The surface location for the proposed Rosa Unit Well No. 382 well is 95 feet from the South line and 1415 feet from the East line of said Section 12, Township 31 North, Range 5 West, and is therefore does not comply with Rule 7 of the Special Rules and Regulations for the Basin Fruitland Coal Gas Pool. This unorthodox surface location is necessary to enable Williams to enter the Fruitland Coal at the proposed Entry Point and thereby have as much of the horizontal portion of the

HOLLAND & HART

wellbore as possible in the Project Area for the well. The Point of Entry into the Fruitland Coal is 575 feet from the South line and 1555 feet from the East line of Section 12. The lateral portion of the well is projected to a point 1115 feet from the North line and 2630 feet from the East line of the section or approximately 10 feet from the outer boundary of the Project Area for the well (E/2 of Section 12). The horizontal portion of the wellbore of the Rosa Unit Well No. 382 will be entirely confined within the E/2 of Section 12. The wellbore is therefore unorthodox under to Division Rule 111.C (2) and Rule 7 of the Special Pool Rules and Regulations for the Basin-Fruitland Coal Gas Pool.

Williams proposes to drill a vertical well to a kick-off point at a depth of 3008.26 feet and build a curve at a rate of 12.00 degrees per 100 feet and drill until a 90 degree curve is achieved at a true vertical depth of 3890.95 feet. Williams proposes to then drill a lateral in a northwesterly direction along an azimuth of 342.88 degrees for a bottomhole displacement of approximately 3726 feet to a terminus in the NE/4 of Section 12 at a point 1115 feet from the North line and 2630 feet from the East line of said Section 12.

The spacing unit for the proposed horizontal well comprised of the E/2 of said Section 12 is located within the Rosa Unit, a voluntary exploratory unit operated by Williams Production Company, LLC. This spacing unit/project area is offset on the all sides by the Rosa Unit except for Section 2 which offsets this spacing unit project/area to the north that is located in the Carracas Canyon Unit which is operated by Energen Resources Corporation. Pursuant to Rules 8 and 9(A) of the Special Pool Rules for the Basin Fruitland Coal Gas Pool, Energen Resources Corporation has been notified of this application by certified mail and have been advised that if they have objections to this application the objection must be filed in writing with the Santa Fe Office of the Division located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within 20 days of the date of this application or the application may be approved.

Attached to this application are the following documents:

- Exhibit A.** Plats showing the proposed spacing unit, the unorthodox surface location, projected horizontal wellbore and the proposed lateral end of the wellbore and the boundary of the offsetting Carracas Unit;
- Exhibit B.** A copy of Division Form C-102 identifying the proposed 320-acre standard gas spacing or proration unit/project area to be dedicated to the well; and
- Exhibit C.** The Halliburton Sperry-Sun Proposal Report for the Rosa Unit Well No. 382 which contains schematic drawings of the proposed well that fully describe the casing, tubing, perforated or open hole interval, kick-off point, and proposed trajectory of the directional wellbore.

HOLLAND & HART^{LLP}



Enclosed in hard copy is a proposed order granting this application.

Your attention to this matter is appreciated.

Very truly yours,

A handwritten signature in black ink, appearing to read "William F. Carr".

William F. Carr

Attorney for Williams Production Company

Enclosures

cc: Oil Conservation Division-Aztec

June __, 2006

Williams Production Company, L.L.C.
c/o Holland & Hart LLP
Post Office Box 2208
Santa Fe, New Mexico 87504-2208
Attention: William F. Carr

Telefax No. (505) 983-6043

Administrative Order NSL- ____
(Non-Standard Subsurface Location/Producing Area)

Dear Mr. Carr:

Reference is made to the following: (i) your application on behalf of the operator, Williams Production Company, L.L.C. ("Williams") dated June 12, 2006 (*application reference No. _____*); (ii) the records of the New Mexico Oil Conservation Division ("Division") in Aztec and Santa Fe: all concerning William's request for exception to Division Rules 111.A (13) and 111.C (2) and Rule 7 of the "*Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool*," as promulgated by Division Order No. R-8768, as amended.

The Division Director Finds That:

- (1) The subject application has been duly filed under the provisions of Division Rule 111.C (2) and the applicable provisions of the special rules governing the Basin-Fruitland Coal (Gas) Pool (**71629**);
- (2) The special rules governing the Basin-Fruitland Coal (Gas) Pool provides for 320-acre gas spacing units and wells to be located within either the NE/4 or SW/4 of the section and not closer than 660 feet from any outer boundary of the spacing unit nor closer than 10 feet from any quarter-quarter section line or subdivision inner boundary;
- (4) The "project area" proposed by Williams is to consist of a single standard 320-acre stand-up gas spacing unit comprising the E/2 of Section 12, Township 31 North, Range 5 West, NMPM, Rio Arriba County, New Mexico;
- (5) It is our understanding that Williams intends to drill its Rosa Unit Well No. 382 (**API No. 30-039-_____**) from a surface location 95 feet from the South line and 1415 feet from the East line (Unit O) of Section 12, Township 31 North, Range 5 West, and directionally drill a vertical wellbore to an approximate depth of 3008.26 feet, kick-off in a northwesterly direction, build angle at a rate of 12

degrees per 100 feet until 90 degrees of vertical is achieved at a depth of 3890.95 feet (TVD). The point of entry into the Fruitland Coal will be at a point 575 feet from the South line and 1555 feet from the East line of Section 12, Township 31 North, Range 5 West and Williams will then directionally drill a horizontal drainhole a lateral distance of 3726 feet to an unorthodox terminus location at a point 1115 feet from the North line and 2630 feet from the East line of said Section 12;

- (6) It appears that the applicant has satisfied all of the appropriate requirements prescribed in Division Rule 111.C (2) and Rule 9 (B) of the Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool; therefore the subject application should be approved; and
- (7) The provisions contained within this order and all other applicable provisions of Division Rule 111 and Division Order No. R-8768, as amended, should govern the subject well and 320-acre gas spacing unit.

It Is Therefore Ordered That:

(1) By the authority granted me under the provisions of Rule 9 (B) of the "*Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool*," as promulgated by Division Order No. R-8768, as amended, the application of Williams Production Company, L.L.C. ("Williams") for exception to Division Rules 111.A (13) and 111.C (2) and Rule 7 of the Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool (71629), is hereby approved. Williams is further authorized to drill its Rosa Unit Well No. 382 (API No. _____) at a surface location 95 feet from the South line and 1415 feet from the East line (Unit O) of Section 12, Township 31 North, Range 5 West, NMPM, Rio Arriba County, New Mexico, drill vertical to an approximate depth of 3008.26 feet, kick-off in a northwesterly direction, build angle at a rate of 12 degrees per 100 feet until 90 degrees off of vertical is achieved at a depth of 3890.95 feet (TVD). The point of entry into the Fruitland Coal will be at a point 575 feet from the South line and 1555 feet from the East line of Section 12, Township 31 North, Range 5 West and Williams will then directionally drill a horizontal drainhole a lateral distance of 3726 feet to an unorthodox location at a point 1115 feet from the North line and 2630 feet from the East line of said Section 12.

(2) The "project area" for this well shall consist of a single standard 320-acre stand-up gas spacing unit comprising the E/2 of Section 12.

(3) An exception to the provisions of Rule 7 of the Special Rules for the Basin-Fruitland Coal (Gas) Pool is hereby granted to permit the horizontal portion of the wellbore to be

within a drilling window or producing area for the within the Basin-Fruitland Coal (Gas) Pool for this wellbore 10 feet from the outer boundary of the project area.

(4) The operator shall comply with all applicable requirements and conditions set forth in Division Rule 111 and Division Order No. R-8768, as amended.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.
Director

cc: New Mexico Oil Conservation Division – Aztec
U. S. Bureau of Land Management - Farmington

Williams, BP, SMUD
SF-078763

3

2

1

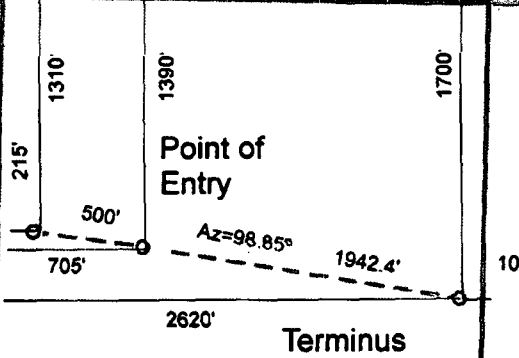
Carracas

Rosa Unit
#351A
(Surface Location)

Williams, BP, SMUD
SF-078763

10

Williams, BP, SMUD
SF-078770



Rosa

11

Williams
SF-078762

12

T-31-N R-5-W

Dedicated Acreage

Williams, BP
SF-078762

15

14

13

EXHIBIT A

1,000 500 0 1,000 Feet

Map Document: (G:\Project\Employee\Vern_Hansen\ROSA_UNIT_382\arge_SECT_PLAT_382.mxd)
6/16/2005 - 3:22:41 PM



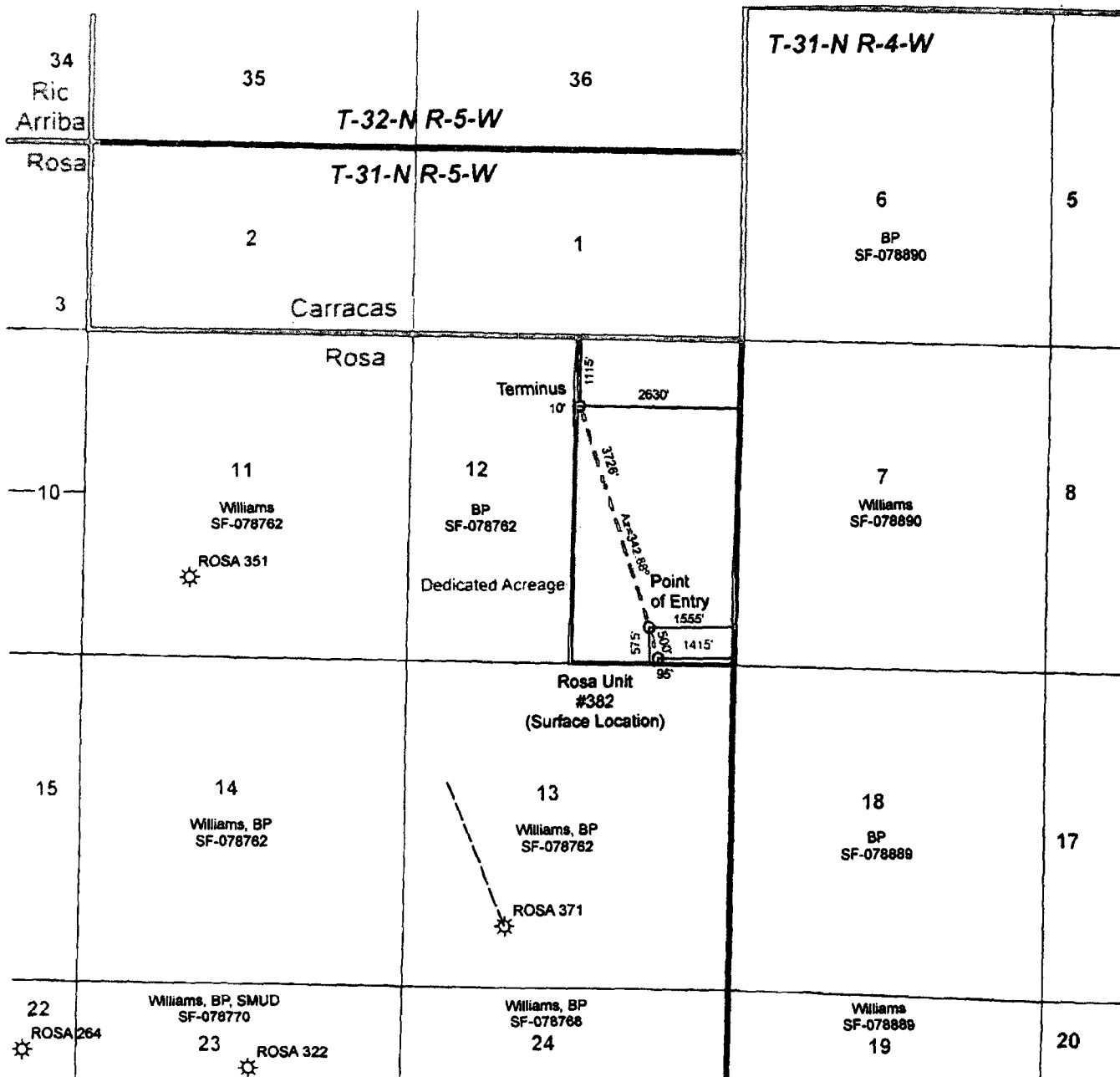
Williams² Exploration & Production Williams²

Rosa Unit #351A
Sec. 11, T-31-N, R-5-W

Scale: 1:30000

Projection: UTM 1827, Zone 13

Author: Suzanne Armstrong



2,500 1,250 0 2,500 Feet



Map Document: (G:\Project\Employees\VERN_H-1\ROSA_U-319_SECT-1.MXD)
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Williams Exploration & Production Williams

Rosa Unit #382
Sec. 12, T-31-N, R-5-W

Scale: 1:30000

Projection: UTM 1927, Zone 13

Author: Suzanne Armstrong

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
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 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 382
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6671'

10 Surface Location

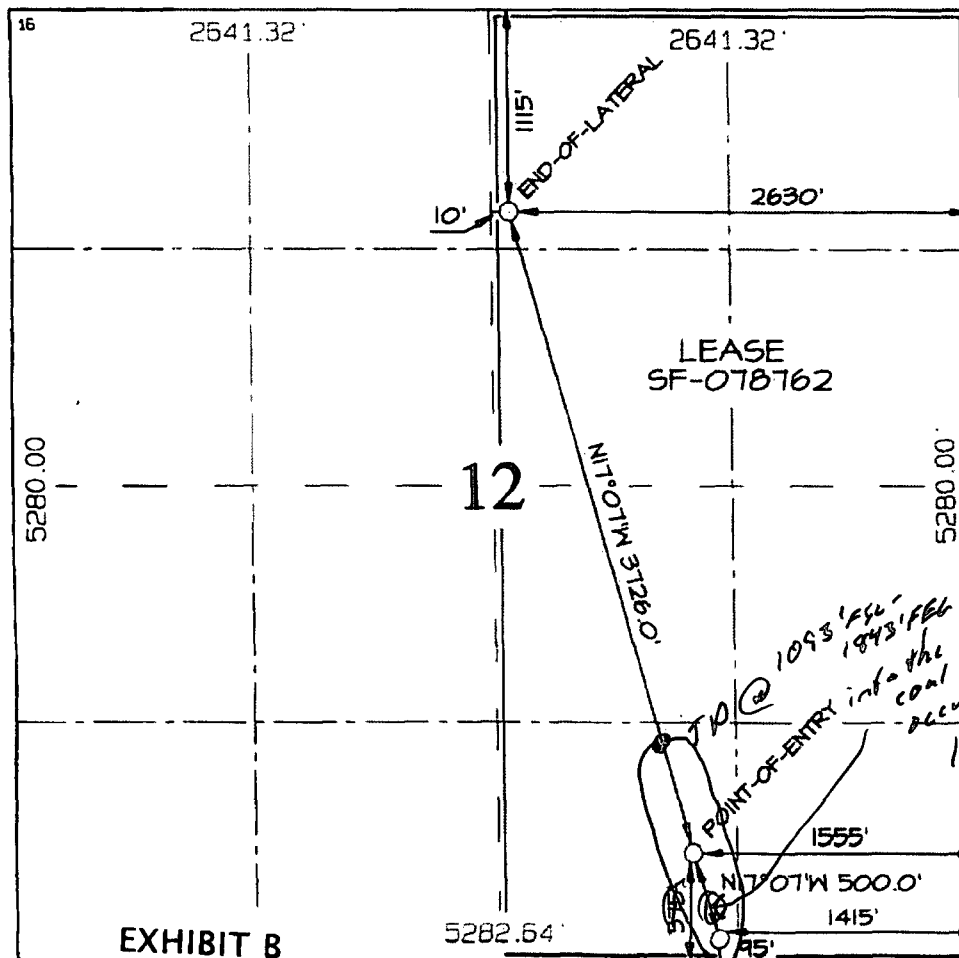
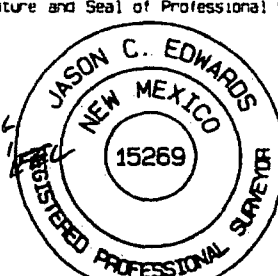
Lot or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County
0	12	31N	5W		95	SOUTH	1415	EAST	RIO ARriba

11 Bottom Hole Location If Different From Surface

Lot or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County
8	12	31N	5W		1115	NORTH	2630	EAST	RIO ARriba

12 Dedicated Acres 320.0 Acres - (E/2)	13 Joint or Initial	14 Consolidation Code	15 Order No.
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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

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature _____ Printed Name _____ Title _____ Date _____
	18 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. Date Revised: JUNE 7, 2005 Date of Survey: JUNE 21, 2004 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269



**Williams Production Company
New Mexico
Rio Arriba County
Sec. 12-T31N-R05W
Rosa Unit #382H - Plan 052505**

Revised: 25 May, 2005

**Haliburton Sperry-Drilling
Proposal Report**

25 May, 2005

Data Source: Mr. Gary Sizemore
Surface Coordinates: 2149813.97 N, 653414.00 E (36° 54' 25.0000" N, 107° 18' 31.0000" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Western Zone

Surface Coordinates relative to Global Coordinates: 644822.85 N, 355733.24 E (Grid)
Surface Coordinates relative to SE Cor of Sec 12: 95.00 N, 1415.00 W (True)
Kelly Bushing Elevation: 6686.00ft above Mean Sea Level
Kelly Bushing Elevation: 68.00ft below Structure

Proposal Ref: pro8517

HALLIBURTON

Sperry Drilling Services

EXHIBIT C

New Mexico
Rio Arriba County
Sec. 12-T31N-R05W
Rosa Unit #382H
Plan 052505



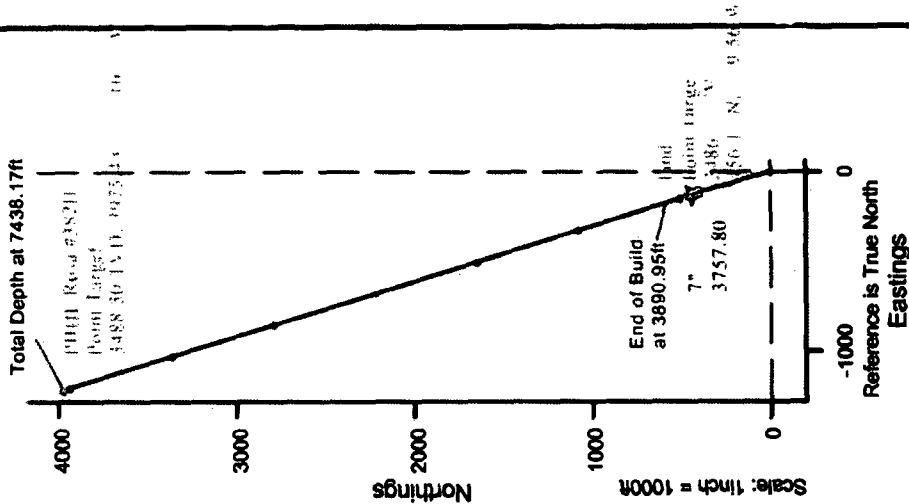
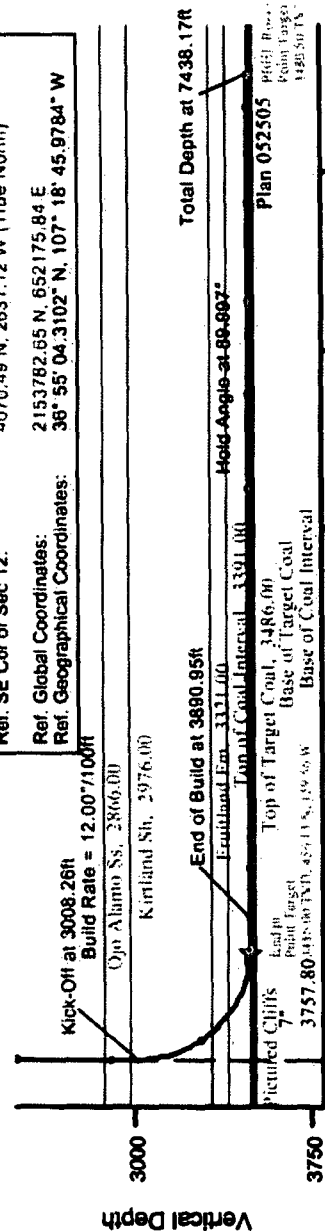
Rosa Unit #382H Surface Location	
RKB Elevation:	6666.00ft above Mean Sea Level
Ref. SE Cor of Sec 12:	96.00 N, 1415.00 W
Ref. Global Coordinates:	2149813.97 N, 653414.00 E
Ref. Geographical Coordinates:	36° 54' 25.0000" N, 107° 15' 31.0000" W

Plan 052505 Proposal Data

Measured Depth	Incl.	Adm.	Vertical Depth	Northings	Eastings	Vertical Section	Dogleg Rate
Kick-Off Point	0.00	0.000	0.00	0.00 N	0.00 E	0.00	0.00
Hold Angle	3008.26	0.000	3008.26	0.00 N	0.00 E	0.00	0.00
Start Build	3741.59	88.000	3485.43	440.64 N	134.82 W	460.80	12.00
Hold Angle	3757.80	88.000	3486.00	436.13 N	139.56 W	477.00	0.00
Hold Angle	3890.95	89.997	3488.33	583.42 N	178.50 W	610.12	1.50
Total Depth	7438.17	89.997	3488.50	3975.43 N	1216.32 W	4157.34	0.00

Plan 052505 Bottom Hole Location

Ref. RKB (6671' ±15' KB):	3488.50ft
Ref. Structure:	3556.50ft
Ref. Mean Sea Level:	-3187.50ft
Ref. Wellhead:	3875.43 N, 1216.32 W (True North)
Ref. SE Cor of Sec 12:	4070.49 N, 2631.12 W (True North)
Ref. Global Coordinates:	2153782.65 N, 652175.84 E
Ref. Geographical Coordinates:	36° 55' 04.3102" N, 107° 18' 45.9784" W



Approved

Checked

28 Mar. 2006 - 10:06

Date/Time

Section Azimuth: 342.988° (True North)

Prepared by

Drilling Cook

Proposal Report for Sec. 12-T31N-R05W - Rosa Unit #382H - Plan 052505

Data Source: Mr. Gary Sizemore

Revised: 25 May, 2005

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
0.00	0.000	0.000	0.00	0.00	0.00 N	0.00 E		95.00 FSL	1415.00 FEL	2149813.97 N	653414.00 E
Ojo Alamo Ss											
2866.00	0.000	0.000	2866.00	0.00	0.00 N	0.00 E	0.00	95.00 FSL	1415.00 FEL	2149813.97 N	653414.00 E
Kirtland Sh											
2976.00	0.000	0.000	2976.00	0.00	0.00 N	0.00 E	0.00	95.00 FSL	1415.00 FEL	2149813.97 N	653414.00 E
Kick-Off at 3008.26ft											
3008.26	0.000	0.000	3008.26	0.00	0.00 N	0.00 E	0.00	95.00 FSL	1415.00 FEL	2149813.97 N	653414.00 E
3100.00	11.009	342.988	3099.44	8.79	8.40 N	2.57 W	12.00	103.40 FSL	1417.57 FEL	2149822.36 N	653411.39 E
3200.00	23.009	342.988	3194.89	37.98	36.32 N	11.11 W	12.00	131.32 FSL	1426.11 FEL	2149850.23 N	653402.89 E
3300.00	35.009	342.988	3282.18	86.39	82.61 N	25.27 W	12.00	177.61 FSL	1440.27 FEL	2149896.44 N	653388.27 E
Frutland Fm											
3349.26	40.920	342.988	3321.00	116.68	111.58 N	34.13 W	12.00	206.57 FSL	1449.13 FEL	2149925.36 N	653379.25 E
3400.00	47.009	342.988	3357.51	151.89	145.24 N	44.43 W	12.00	240.24 FSL	1459.43 FEL	2149958.97 N	653368.77 E
Top of Coal Interval											
3452.29	53.284	342.988	3391.00	192.01	183.61 N	56.17 W	12.00	278.61 FSL	1471.17 FEL	2149997.27 N	653356.82 E
3500.00	59.009	342.988	3417.57	231.61	221.48 N	67.75 W	12.00	316.48 FSL	1482.75 FEL	2150035.08 N	653345.02 E
3600.00	71.009	342.988	3459.74	322.09	308.00 N	94.22 W	12.00	403.00 FSL	1509.22 FEL	2150121.44 N	653318.08 E
3700.00	83.009	342.988	3482.18	419.35	401.01 N	122.87 W	12.00	498.00 FSL	1537.67 FEL	2150214.29 N	653289.11 E
End of Build at 3741.59ft											
3741.59	88.000	342.988	3485.43	460.80	440.65 N	134.80 W	12.00	535.64 FSL	1549.80 FEL	2150253.86 N	653276.76 E
Start Build at 3757.80ft, Top of Target Coal											

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates		Dogleg Severit (°/100ft)	Lease Calls		Global Coordinates	
					N-S (ft)	E-W (ft)		FNL-FSL (ft)	FEL-FWL (ft)	Grid Y (ft)	Grid X (ft)
3757.80	88.000	342.988	3488.00	477.00	456.14 N	139.53 W	0.00	551.13 FSL	1554.53 FEL	2150269.33 N	653271.94 E
3800.00	88.633	342.988	3487.24	519.18	496.47 N	151.87 W	1.50	591.47 FSL	1566.87 FEL	2150308.59 N	653259.38 E
End of Build at 3890.95ft											
3890.95	89.997	342.988	3488.33	610.12	583.43 N	178.47 W	1.50	678.43 FSL	1593.48 FEL	2150396.41 N	653232.29 E
3900.00	89.997	342.988	3488.33	619.17	592.09 N	181.12 W	0.00	687.09 FSL	1596.12 FEL	2150405.05 N	653229.60 E
4000.00	89.997	342.988	3488.33	719.17	687.71 N	210.37 W	0.00	782.71 FSL	1625.36 FEL	2150500.51 N	653199.82 E
4100.00	89.997	342.988	3488.34	819.17	783.34 N	239.63 W	0.00	878.34 FSL	1654.63 FEL	2150595.97 N	653170.03 E
4200.00	89.997	342.988	3488.34	919.17	878.96 N	268.88 W	0.00	973.96 FSL	1683.88 FEL	2150691.43 N	653140.25 E
4300.00	89.997	342.988	3488.35	1019.17	974.59 N	288.13 W	0.00	1069.59 FSL	1713.13 FEL	2150786.89 N	653110.47 E
4400.00	89.997	342.988	3488.35	1119.17	1070.22 N	327.38 W	0.00	1165.22 FSL	1742.38 FEL	2150882.36 N	653080.68 E
4500.00	89.997	342.988	3488.36	1219.17	1165.84 N	356.64 W	0.00	1260.84 FSL	1771.84 FEL	2150977.82 N	653050.90 E
4600.00	89.997	342.988	3488.36	1319.17	1261.47 N	385.89 W	0.00	1356.47 FSL	1800.89 FEL	2151073.28 N	653021.12 E
4700.00	89.997	342.988	3488.37	1419.17	1357.09 N	415.14 W	0.00	1452.09 FSL	1830.14 FEL	2151168.74 N	652991.34 E
4800.00	89.997	342.988	3488.37	1519.17	1452.72 N	444.39 W	0.00	1547.72 FSL	1859.39 FEL	2151264.20 N	652961.55 E
4900.00	89.997	342.988	3488.38	1619.17	1548.35 N	473.65 W	0.00	1643.34 FSL	1888.65 FEL	2151359.67 N	652931.77 E
5000.00	89.997	342.988	3488.38	1719.17	1643.97 N	502.90 W	0.00	1738.97 FSL	1917.90 FEL	2151455.13 N	652901.99 E
5100.00	89.997	342.988	3488.39	1819.17	1739.60 N	532.15 W	0.00	1834.60 FSL	1947.15 FEL	2151550.59 N	652872.21 E
5200.00	89.997	342.988	3488.39	1919.17	1835.22 N	561.40 W	0.00	1930.22 FSL	1976.40 FEL	2151646.05 N	652842.42 E
5300.00	89.997	342.988	3488.40	2019.17	1930.85 N	590.65 W	0.00	2025.85 FSL	2005.66 FEL	2151741.51 N	652812.64 E
5400.00	89.997	342.988	3488.40	2119.17	2026.47 N	619.91 W	0.00	2121.47 FSL	2034.91 FEL	2151836.98 N	652782.86 E
5500.00	89.997	342.988	3488.41	2219.17	2122.10 N	649.16 W	0.00	2217.10 FSL	2064.16 FEL	2151932.44 N	652753.08 E
5600.00	89.997	342.988	3488.41	2319.17	2217.73 N	678.41 W	0.00	2312.73 FSL	2093.41 FEL	2152027.90 N	652723.29 E
5700.00	89.997	342.988	3488.42	2419.17	2313.35 N	707.66 W	0.00	2408.35 FSL	2122.67 FEL	2152123.36 N	652693.51 E
5800.00	89.997	342.988	3488.42	2519.17	2408.98 N	736.92 W	0.00	2503.98 FSL	2151.92 FEL	2152218.82 N	652663.73 E
5900.00	89.997	342.988	3488.42	2619.17	2504.60 N	766.17 W	0.00	2599.60 FSL	2181.17 FEL	2152314.28 N	652633.94 E
6000.00	89.997	342.988	3488.43	2719.17	2600.23 N	795.42 W	0.00	2695.23 FSL	2210.42 FEL	2152409.75 N	652604.16 E
6100.00	89.997	342.988	3488.43	2819.17	2695.86 N	824.67 W	0.00	2790.85 FSL	2239.67 FEL	2152505.21 N	652574.38 E
6200.00	89.997	342.988	3488.44	2919.17	2791.48 N	853.93 W	0.00	2886.48 FSL	2268.93 FEL	2152600.67 N	652544.60 E
6300.00	89.997	342.988	3488.44	3019.17	2887.11 N	883.18 W	0.00	2982.11 FSL	2298.18 FEL	2152696.13 N	652514.81 E
6400.00	89.997	342.988	3488.45	3119.17	2982.73 N	912.43 W	0.00	3077.73 FSL	2327.43 FEL	2152791.60 N	652485.03 E
6500.00	89.997	342.988	3488.45	3219.17	3078.36 N	941.68 W	0.00	3173.36 FSL	2356.68 FEL	2152887.06 N	652455.25 E
6600.00	89.997	342.988	3488.46	3319.17	3173.98 N	970.94 W	0.00	3268.98 FSL	2385.94 FEL	2152982.52 N	652425.47 E
6700.00	89.997	342.988	3488.46	3419.17	3269.61 N	1000.19 W	0.00	3364.61 FSL	2415.19 FEL	2153077.98 N	652395.68 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit ("'/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
6800.00	89.997	342.988	3488.47	3519.17	3365.24 N	1029.44 W	0.00	3460.24 FSL	2444.44 FEL	2153173.44 N	652365.90 E
6900.00	89.997	342.988	3488.47	3619.17	3460.86 N	1056.69 W	0.00	3555.86 FSL	2473.69 FEL	2153268.91 N	652336.12 E
7000.00	89.997	342.988	3488.48	3719.17	3556.49 N	1087.94 W	0.00	3651.49 FSL	2502.95 FEL	2153364.37 N	652306.34 E
7100.00	89.997	342.988	3488.48	3819.17	3652.11 N	1117.20 W	0.00	3747.11 FSL	2532.20 FEL	2153459.83 N	652276.55 E
7200.00	89.997	342.988	3488.49	3919.17	3747.74 N	1146.45 W	0.00	3842.74 FSL	2561.45 FEL	2153555.29 N	652246.77 E
7300.00	89.997	342.988	3488.49	4019.17	3843.37 N	1175.70 W	0.00	3938.36 FSL	2590.70 FEL	2153650.75 N	652216.99 E
7400.00	89.997	342.988	3488.50	4119.17	3938.99 N	1204.95 W	0.00	4033.99 FSL	2619.96 FEL	2153746.22 N	652187.20 E
Total Depth at 7438.17ft											
7438.17	89.997	342.988	3488.50	4157.34	3975.49 N	1216.12 W	0.00	4070.49 FSL	2631.12 FEL	2153782.65 N	652175.84 E

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB (6671' ±15' KB). Northings and Eastings are relative to Wellhead.

Based upon Minimum Curvature type calculations, at a Measured Depth of 7438.17ft.,
The Bottom Hole Displacement is 4157.34ft., in the Direction of 342.988° (True).

Proposal Report for Sec. 12-T31N-R05W - Rosa Unit #382H - Plan 052505
Data Source: Mr. Gary Sizemore
Revised: 25 May, 2005

Comments

Measured Depth (ft)	Station Coordinates			Comment
	TVD (ft)	Northings (ft)	Eastings (ft)	
3008.26	3008.26	0.00 N	0.00 E	Kick-Off at 3008.26ft
3741.59	3485.43	440.65 N	134.80 W	End of Build at 3741.59ft
3757.80	3486.00	456.14 N	139.53 W	Start Build at 3757.80ft
3890.95	3488.33	583.43 N	178.47 W	End of Build at 3890.95ft
7438.17	3488.50	3975.49 N	1216.12 W	Total Depth at 7438.17ft

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)
-3820.00	0.000	0.460	2866.00	2866.00	-3820.00	0.00 N	0.00 E	Ojo Alamo Ss
-3710.00	0.000	0.460	2976.00	2976.00	-3710.00	0.00 N	0.00 E	Kirtland Sh
-3365.00	0.000	0.460	3349.26	3321.00	-3365.00	111.58 N	34.13 W	Fruitland Fm
-3295.00	0.000	0.460	3452.29	3391.00	-3295.00	183.61 N	56.17 W	Top of Coal Interval
-3200.00	0.000	0.460	3757.80	3486.00	-3200.00	456.14 N	139.53 W	Top of Target Coal
-3195.00	0.000	0.460						Base of Target Coal
-3185.00	0.000	0.460						Base of Coal Interval
-3180.00	0.000	0.460						Pictured Cliffs

North Reference Sheet for Sec. 12-T31N-R05W - Rosa Unit #382H

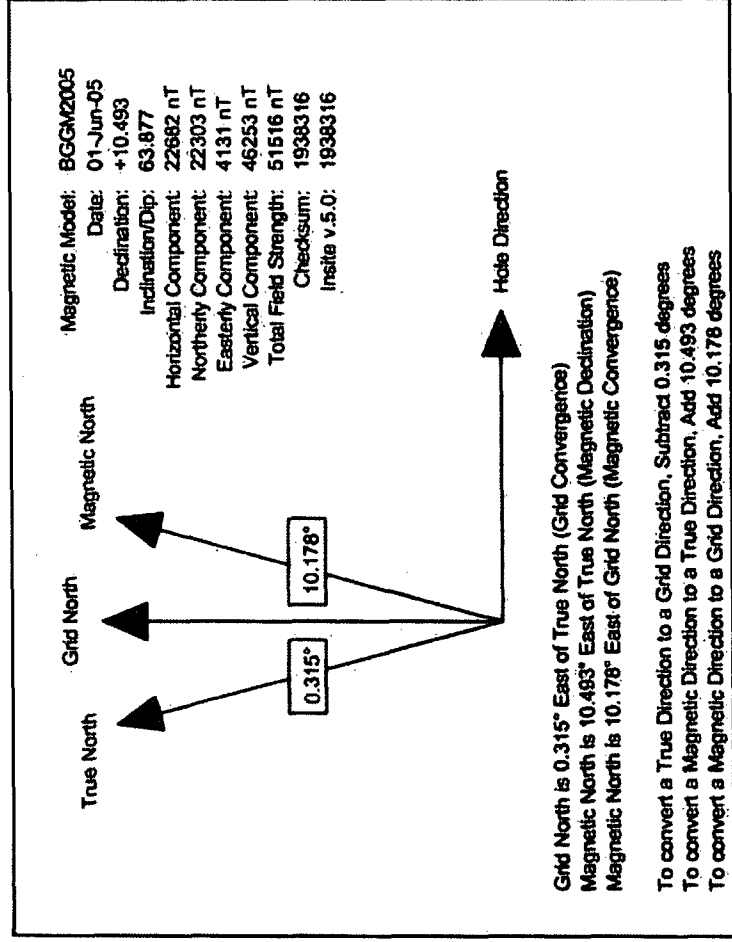
Coordinate System is NAD27 New Mexico State Planes, Western Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)

Spheroid is Clarke - 1866
Equatorial Radius: 6378206.400m.
Polar Radius: 6356583.800m.
Inverse Flattening: 294.978698213901

Projection method is Transverse Mercator or Gauss Kruger Projection
Central Meridian is -107.833°
Longitude Origin: 0.000°
Latitude Origin: 31.000°
False Easting: 152400.00m
False Northing: 0.00m
Scale Reduction: 0.99991667

Grid Coordinates of Well: 2149813.97 N, 653414.00 E
Geographical Coordinates of Well: 36° 54' 25.0000" N, 107° 18' 31.0000" W
Surface Elevation of Well: 6686.00ft
Grid Convergence at Surface is +0.315°
Magnetic Declination at Surface is +10.493° (1 June, 2005)



Halliburton Sperry-Sun

Williams Production Company
Rosa Unit #382H - Plan 052505

New Mexico
Rio Arriba County
Sec. 12-T31N-R05W
Data Source: Mr. Gary Sizemore

Meas.	Sub-Sea	Vert.	Local	Local	Global	Global	Global	Vert.	Dogleg
0	0	0	0.00 N	0.00 N	0.00 E	2149813.97	653414.00 I	0	0
2866	0	0	0.00 N	0.00 N	0.00 E	2149813.97	653414.00 I	0	0
2976	0	0	0.00 N	0.00 N	0.00 E	2149813.97	653414.00 I	0	0
3008.26	0	0	0.00 N	0.00 N	0.00 E	2149813.97	653414.00 I	0	0
3100	11.009	342.988	8.40 N	8.40 N	2.57 W	2149822.36	653411.39 I	8.79	12
3200	23.009	342.988	36.32 N	36.32 N	11.11 W	2149850.23	653402.69 I	37.98	12
3300	35.009	342.988	82.61 N	82.61 N	25.28 W	2149896.44	653388.27 I	86.39	12
3349.26	40.92	342.988	111.57 N	111.57 N	34.14 W	2149925.36	653379.25 I	116.68	12
3400	47.009	342.988	145.24 N	145.24 N	44.44 W	2149958.97	653368.77 I	151.89	12
3452.29	53.284	342.988	183.61 N	183.61 N	56.18 W	2149987.27	653356.82 I	192.01	12
3500	59.009	342.988	221.48 N	221.48 N	67.76 W	2150035.08	653345.02 I	231.61	12
3600	71.009	342.988	307.99 N	307.99 N	94.23 W	2150121.44	653318.08 I	322.09	12
3700	83.009	342.988	401.00 N	401.00 N	122.69 W	2150214.28	653289.11 I	419.35	12
3741.59	88	342.988	440.64 N	440.64 N	134.82 W	2150253.86	653276.76 I	460.8	12
3757.8	88	342.988	456.13 N	456.13 N	139.56 W	2150289.33	653271.94 I	477	15
3800	88.633	342.988	496.46 N	496.46 N	151.90 W	2150309.59	653259.38 I	519.18	15
3890.95	89.997	342.988	583.42 N	583.42 N	178.50 W	2150396.41	653232.29 I	610.12	15
3900	89.997	342.988	592.08 N	592.08 N	181.15 W	2150405.05	653229.60 I	619.17	0
4000	89.997	342.988	687.70 N	687.70 N	210.41 W	2150500.51	653199.82 I	719.17	0
4100	89.997	342.988	783.33 N	783.33 N	239.67 W	2150595.97	653170.03 I	819.17	0
4200	89.997	342.988	878.95 N	878.95 N	268.92 W	2150691.43	653140.25 I	919.17	0
4300	89.997	342.988	974.58 N	974.58 N	298.18 W	2150788.89	653110.47 I	1019.17	0
4400	89.997	342.988	1070.20 N	1070.20 N	327.44 W	2150882.36	653080.68 I	1119.17	0
4500	89.997	342.988	1165.82 N	1165.82 N	356.70 W	2150977.82	653050.90 I	1219.17	0
4600	89.997	342.988	1261.45 N	1261.45 N	385.95 W	2151073.28	653021.12 I	1319.17	0
4700	89.997	342.988	1357.07 N	1357.07 N	415.21 W	2151168.74	652991.34 I	1419.17	0
4800	89.997	342.988	1452.70 N	1452.70 N	444.47 W	2151264.20	652961.55 I	1519.17	0
4900	89.997	342.988	1548.32 N	1548.32 N	473.72 W	2151359.67	652931.77 I	1619.17	0
5000	89.997	342.988	1643.95 N	1643.95 N	502.98 W	2151455.13	652901.99 I	1719.17	0
5100	89.997	342.988	1739.57 N	1739.57 N	532.24 W	2151550.59	652872.21 I	1819.17	0
5200	89.997	342.988	1835.19 N	1835.19 N	561.50 W	2151646.05	652842.42 I	1919.17	0
5300	89.997	342.988	1930.82 N	1930.82 N	590.75 W	2151741.51	652812.64 I	2019.17	0
5400	89.997	342.988	2026.44 N	2026.44 N	620.01 W	2151836.98	652782.86 I	2119.17	0

12 End of Build at 3741.59ft
0 Start Build at 3757.80ft - Top of Target Coal
1.5 End of Build at 3890.95ft

5500	89.997	342.988	-3197.59	3488.41	2122.07 N	649.27 W	2151932.44	652753.08	2219.17	0
5600	89.997	342.988	-3197.59	3488.41	2217.69 N	678.52 W	2152027.90	652723.29	2319.17	0
5700	89.997	342.988	-3197.58	3488.42	2313.32 N	707.78 W	2152123.36	652693.51	2419.17	0
5800	89.997	342.988	-3197.58	3488.42	2408.94 N	737.04 W	2152218.82	652663.73	2519.17	0
5900	89.997	342.988	-3197.58	3488.42	2504.57 N	766.30 W	2152314.29	652633.94	2619.17	0
6000	89.997	342.988	-3197.57	3488.43	2600.19 N	795.55 W	2152409.75	652604.16	2719.17	0
6100	89.997	342.988	-3197.57	3488.43	2695.81 N	824.81 W	2152505.21	652574.38	2819.17	0
6200	89.997	342.988	-3197.56	3488.44	2791.44 N	854.07 W	2152600.67	652544.60	2919.17	0
6300	89.997	342.988	-3197.56	3488.44	2887.06 N	883.32 W	2152696.13	652514.81	3019.17	0
6400	89.997	342.988	-3197.55	3488.45	2982.69 N	912.58 W	2152791.60	652485.03	3119.17	0
6500	89.997	342.988	-3197.55	3488.45	3078.31 N	941.84 W	2152887.06	652455.25	3219.17	0
6600	89.997	342.988	-3197.54	3488.46	3173.94 N	971.10 W	2152982.52	652425.47	3319.17	0
6700	89.997	342.988	-3197.54	3488.46	3269.56 N	1000.35 W	2153077.98	652395.68	3419.17	0
6800	89.997	342.988	-3197.53	3488.47	3365.18 N	1029.61 W	2153173.44	652365.90	3519.17	0
6900	89.997	342.988	-3197.53	3488.47	3460.81 N	1058.87 W	2153268.91	652336.12	3619.17	0
7000	89.997	342.988	-3197.52	3488.48	3556.43 N	1088.13 W	2153364.37	652306.34	3719.17	0
7100	89.997	342.988	-3197.52	3488.48	3652.06 N	1117.38 W	2153459.83	652276.55	3819.17	0
7200	89.997	342.988	-3197.51	3488.49	3747.68 N	1146.64 W	2153555.29	652246.77	3919.17	0
7300	89.997	342.988	-3197.51	3488.49	3843.31 N	1175.90 W	2153650.75	652216.99	4019.17	0
7400	89.997	342.988	-3197.5	3488.5	3938.93 N	1205.15 W	2153746.22	652187.20	4119.17	0
7438.17	89.997	342.988	-3197.5	3488.5	3975.43 N	1216.32 W	2153782.65	652175.84	4157.34	0
										0 Total Depth at 7438.17ft

All data is in feet (us) unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB (8671' +15' KB). Northings and Eastings are relative to Wellhead.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Wellhead and calculated along an Azimuth of 342.988° (True).

Based upon at a Measured Depth of 7438.17ft.

The Bottom in the Direction of 342.988° (True).