

CONFIDENTIAL**DISTRICT I**1625 P. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720**DISTRICT II**811 E. First St., Artesia, N.M. 88210
Phone: (575) 745-1883 Fax: (575) 745-9720**DISTRICT III**1000 Rio Bravos Rd., Artesia, N.M. 87410
Phone: (505) 334-5175 Fax: (505) 334-5170**DISTRICT IV**1220 E. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 475-3450 Fax: (505) 475-3458State of New Mexico
Energy, Minerals & Natural Resources DepartmentForm C-102
Revised August 1, 2011Submit one copy to appropriate
District Office**OIL CONSERVATION DIVISION**
1220 South St. Francis Dr.
Santa Fe, NM 87505☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT** **RCVD NOV 15 '12**
OIL CONS. DIV.**DIST. 3**

¹ API Number 30-039-31119	² Pool Code 27194	³ Pool Name GAVILAN-MANCOS
⁴ Property Code	⁵ Property Name ELK COM 34	⁶ Well Number 1 H
⁷ GRID No. 10825	⁸ Operator Name HUNT OIL COMPANY	⁹ Elevation 7502'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	33	26N	2W		681'	SOUTH	116'	EAST	RIO ARRIBA

¹¹ 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
I	34	26N	2W		1847'	SOUTH	788'	EAST	RIO ARRIBA

¹² Dedicated Acres 640.00 ACRES	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-7407 R-12645
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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

18

1 LAT. 36.43962° N (83) LONG. 107.04425° W (83) 2 LAT. 36.43963° N (83) LONG. 107.03077° W (83) 4 LAT. 36.43801° N (83) LONG. 107.04424° W (83) 3 LAT. 36.43601° N (83) LONG. 107.03078° W (83)	17 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. <i>[Signature]</i> Signature John C. Thompson Printed Name johnnewalsheng.net E-mail Address
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. MAY 3, 2012 Date of Survey Signature and Seal of Professional Surveyor: <i>[Signature]</i> DAVID R. RUSSELL REGISTERED PROFESSIONAL LAND SURVEYOR NEW MEXICO 10201 Certificate Number 10201	

AV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Hunt Oil Company

3a. Address

7415 East Main, Farmington, NM

3b. Phone No. (include area code)

505-327-4892

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface location: 681' fsl & 116' fel Section 33, T26N, R2W

Bottom Hole location: 1847' fsl & 788' fel Section 34, T26N, R2W

5. Lease Serial No.

Fee NM-97827

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or N

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8. Well Name and No.

Elk Com 34 #1H

9. API Well No.

30-039-31119

10. Field and Pool, or Exploratory Area

Gavilan Mancos

11. County or Parish, State

Rio Arriba County

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent☒ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other
Deviation Surveys

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once Testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Please find attached deviation surveys showing the location of the wellbore with the lateral and the bottom hole location of 788.3' FEL & 1847.1' FSL, Sec 34, T26N, R2W.

RCVD NOV 2 '12
OIL CONS. DIV.
DIST. 3

ACCEPTED FOR RECORD

OCT 29 2012

Spud Date: 07:30 hrs 7/22/2012

Drilling Rig Released: 16:00 hrs 9/22/2012.

FARMINGTON FIELD OFFICE
BY T. Salyers

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

Name (Printed/Typed)

John C. Thompson

Title

Agent / Engineer

Signature

Date

September 15, 2012

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

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

N/AOCD



Elk Com 34-1H
ST2
Sec 33 T26N R02W
Rio Arriba County, NM NAD83

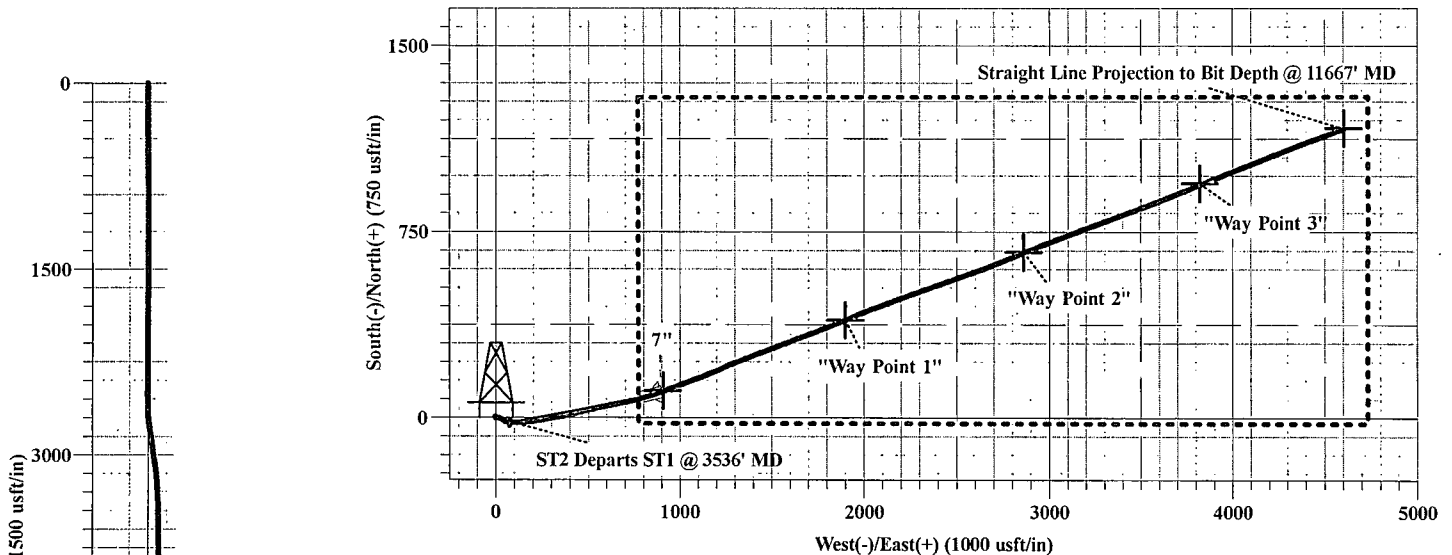
PATHFINDER
A Schlumberger Company

GE: 7502' / KB: 14'

EOW
No Hardlines
Crossed

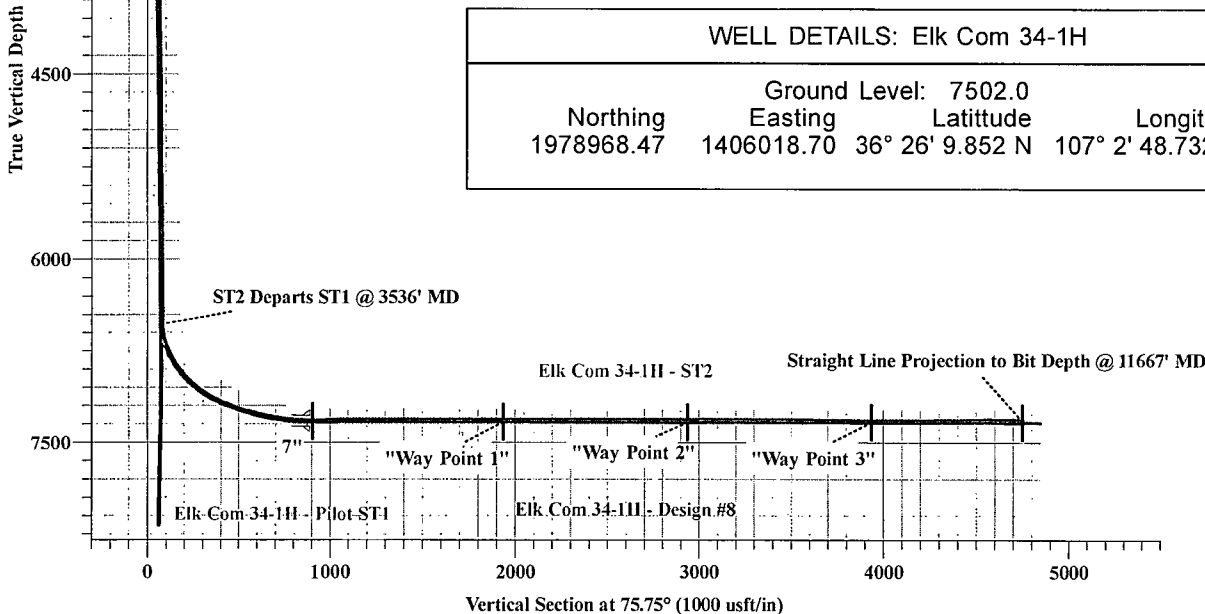
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Landing	7327.0	109.2	906.0	1979070.21	1406925.59	Point
Way Point 1	7332.0	393.7	1898.5	1979346.48	1407920.38	Point
Way Point 2	7334.0	669.4	2860.3	1979614.22	1408884.43	Point
Way Point 3	7336.0	945.0	3822.0	1979881.87	1409848.37	Point
PBHL 1H	7338.0	1169.0	4603.5	1980099.38	1410631.67	Point



WELL DETAILS: Elk Com 34-1H

Ground Level: 7502.0
Northing: 1978968.47 Easting: 1406018.70 Latitude: 36° 26' 9.852 N Longitude: 107° 2' 48.732 W



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
6510.0	0.26	165.60	6506.4	-16.8	82.7	0.00	0.00	76.1	
6536.0	0.30	169.96	6532.4	-16.9	82.8	0.17	30.23	76.1	
7674.7	82.43	81.72	7317.0	78.5	763.4	7.24	-88.28	759.3	
7674.7	82.43	81.72	7317.0	78.5	763.4	0.00	0.00	759.3	
7821.1	89.72	74.01	7327.0	109.2	906.0	7.24	-46.84	905.0	Landing
8853.6	89.72	74.01	7332.0	393.7	1898.5	0.00	0.00	1937.0	Way Point 1
8886.7	89.89	74.01	7332.1	402.8	1930.4	0.50	-0.46	1970.1	
9854.1	89.89	74.01	7334.0	669.4	2860.3	0.00	0.00	2937.1	Way Point 2
10854.5	89.88	74.01	7336.0	945.0	3822.0	0.00	124.93	3937.0	Way Point 3
11667.5	89.84	74.00	7338.0	1169.0	4603.5	0.01	-166.32	4749.6	PBHL 1H

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Plan: Design #8 (Elk Com 34-1H/ST2)

Created By: Breck Enoch

Date: 19-Sep-2012



Hunt Oil Company

Rio Arriba County, NM NAD83

Sec 33 T26N R02W

Elk Com 34-1H

ST2

Design: ST2

Standard Survey Report

19 September, 2012

PATHFINDER
A Schlumberger Company



Pathfinder
Survey Report

PATHFINDER
A Schlumberger Company

Company:	Hunt Oil Company	Local Co-ordinate Reference:	Well Elk Com 34-1H
Project:	Rio Arriba County, NM NAD83	TVD Reference:	WELL @ 7516.0usft (Original Well Elev)
Site:	Sec 33 T26N R02W	MD Reference:	WELL @ 7516.0usft (Original Well Elev)
Well:	Elk Com 34-1H	North Reference:	True
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	EDM 5000.1 Single User Db

Project	Rio Arriba County, NM NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site		Sec 33 T26N R02W			
Site Position:		Northing:	1,978,968.48 usft	Latitude:	36° 26' 9.852 N
From:	Lat/Long	Easting:	1,406,018.70 usft	Longitude:	107° 2' 48.732 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.47 °

Well	Elk Com 34-1H					
Well Position	+N/-S	0.0 usft	Northing:	1,978,968.48 usft	Latitude:	36° 26' 9.852 N
	+E/-W	0.0 usft	Easting:	1,406,018.70 usft	Longitude:	107° 2' 48.732 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	7,502.0 usft

Wellbore	ST2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	05/25/12	9.44	63.31	50,553

Design	ST2				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	6,447.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	75.75	

Survey Program	Date	09/19/12			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
342.0	4,148.0	Survey #1 (Pilot ST1)	MWD	MWD - Standard	
4,242.0	5,755.0	Survey #2 (Pilot ST1)	MWD	MWD - Standard	
5,818.0	6,447.0	Survey #3 (Pilot ST1)	MWD	MWD - Standard	
6,512.0	11,667.0	Survey #1 (ST2)	MWD	MWD - Standard	

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	
342.0	0.26	146.45	342.0	-0.6	0.4	0.3	0.08	0.08	0.00	
770.0	0.18	89.89	770.0	-1.5	1.6	1.2	0.05	-0.02	-13.21	
1,259.0	0.44	337.58	1,259.0	0.3	1.7	1.7	0.11	0.05	-22.97	
1,689.0	0.53	297.98	1,689.0	2.7	-0.7	0.0	0.08	0.02	-9.21	
2,190.0	0.35	348.22	2,190.0	5.3	-3.1	-1.6	0.08	-0.04	10.03	
2,504.0	0.35	166.67	2,504.0	5.3	-3.0	-1.6	0.22	0.00	56.83	
2,566.0	0.18	271.93	2,566.0	5.2	-3.1	-1.7	0.70	-0.27	169.77	



Pathfinder
Survey Report

PATHFINDER
A Schlumberger Company

Company:	Hunt Oil Company	Local Co-ordinate Reference:	Well Elk Corn 34-1H
Project:	Rio Arriba County, NM NAD83	TVD Reference:	WELL @ 7516.0usft (Original Well Elev)
Site:	Sec 33 T26N R02W	MD Reference:	WELL @ 7516.0usft (Original Well Elev)
Well:	Elk Corn 34-1H	North Reference:	True
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	EDM 5000.1 Single User Db

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)
2,629.0	1.41	83.72	2,629.0	5.2	-2.4	-1.0	2.52	1.95	272.68
2,660.0	2.37	93.13	2,659.9	5.2	-1.4	-0.1	3.24	3.10	30.35
2,691.0	3.43	98.46	2,690.9	5.1	0.2	1.4	3.52	3.42	17.19
2,723.0	5.01	103.43	2,722.8	4.6	2.5	3.5	5.06	4.94	15.53
2,754.0	6.07	106.29	2,753.7	3.8	5.4	6.1	3.53	3.42	9.23
2,786.0	6.42	110.81	2,785.5	2.7	8.7	9.1	1.89	1.09	14.13
2,818.0	6.60	110.99	2,817.3	1.4	12.0	12.0	0.57	0.56	0.56
2,880.0	6.95	110.18	2,878.8	-1.1	18.9	18.0	0.59	0.56	-1.31
2,943.0	7.39	110.67	2,941.3	-3.9	26.3	24.5	0.71	0.70	0.78
3,006.0	7.30	111.03	3,003.8	-6.8	33.8	31.1	0.16	-0.14	0.57
3,037.0	6.68	110.93	3,034.6	-8.1	37.3	34.2	2.00	-2.00	-0.32
3,068.0	6.60	110.99	3,065.4	-9.4	40.7	37.1	0.26	-0.26	0.19
3,100.0	6.16	110.69	3,097.2	-10.6	44.0	40.0	1.38	-1.38	-0.94
3,131.0	5.72	114.67	3,128.0	-11.9	46.9	42.6	1.94	-1.42	12.84
3,162.0	4.75	117.25	3,158.9	-13.1	49.5	44.7	3.22	-3.13	8.32
3,193.0	4.40	115.85	3,189.8	-14.2	51.7	46.6	1.19	-1.13	-4.52
3,225.0	3.96	119.81	3,221.7	-15.3	53.8	48.3	1.64	-1.38	12.38
3,256.0	3.52	119.26	3,252.6	-16.3	55.5	49.8	1.42	-1.42	-1.77
3,288.0	2.81	119.07	3,284.6	-17.2	57.1	51.1	2.22	-2.22	-0.59
3,319.0	2.20	119.18	3,315.6	-17.8	58.2	52.1	1.97	-1.97	0.35
3,351.0	1.23	118.44	3,347.6	-18.3	59.1	52.8	3.03	-3.03	-2.31
3,381.0	1.14	113.65	3,377.5	-18.6	59.6	53.2	0.45	-0.30	-15.97
3,413.0	0.97	100.87	3,409.5	-18.7	60.2	53.7	0.90	-0.53	-39.94
3,444.0	0.44	91.80	3,440.5	-18.8	60.6	54.1	1.74	-1.71	-29.26
3,506.0	0.97	39.10	3,502.5	-18.4	61.1	54.7	1.27	0.85	-85.00
3,569.0	1.14	43.19	3,565.5	-17.5	61.9	55.7	0.29	0.27	6.49
3,633.0	0.53	57.04	3,629.5	-16.9	62.6	56.5	1.00	-0.95	21.64
3,695.0	0.70	64.78	3,691.5	-16.6	63.2	57.2	0.30	0.27	12.48
3,758.0	0.97	46.23	3,754.5	-16.0	63.9	58.0	0.60	0.43	-29.44
3,821.0	0.53	73.39	3,817.5	-15.6	64.6	58.7	0.88	-0.70	43.11
3,884.0	0.62	63.74	3,880.5	-15.4	65.2	59.4	0.21	0.14	-15.32
3,947.0	0.70	75.66	3,943.5	-15.1	65.8	60.1	0.25	0.13	18.92
4,010.0	0.97	71.48	4,006.5	-14.8	66.7	61.0	0.44	0.43	-6.63
4,073.0	1.23	81.68	4,069.5	-14.6	67.9	62.2	0.52	0.41	16.19
4,135.0	0.97	88.50	4,131.5	-14.5	69.1	63.4	0.47	-0.42	11.00
4,148.0	0.97	89.58	4,144.5	-14.5	69.3	63.6	0.14	0.00	8.31
4,242.0	1.23	107.55	4,238.4	-14.8	71.1	65.2	0.46	0.28	19.12
4,369.0	0.44	79.53	4,365.4	-15.1	72.8	66.9	0.68	-0.62	-22.06
4,432.0	0.53	72.98	4,428.4	-15.0	73.3	67.4	0.17	0.14	-10.40
4,495.0	0.53	85.06	4,491.4	-14.8	73.9	68.0	0.18	0.00	19.17
4,557.0	0.44	99.27	4,553.4	-14.9	74.4	68.5	0.24	-0.15	22.92
4,621.0	0.44	97.38	4,617.4	-14.9	74.9	68.9	0.02	0.00	-2.95
4,684.0	0.44	98.80	4,680.4	-15.0	75.4	69.4	0.02	0.00	2.25



Pathfinder
Survey Report

PATHFINDER
A Schlumberger Company

Company:	Hunt Oil Company	Local Co-ordinate Reference:	Well Elk Com 34-1H
Project:	Rio Arriba County, NM NAD83	TVD Reference:	WELL @ 7516.0usft (Original Well Elev)
Site:	Sec 33 T26N R02W	MD Reference:	WELL @ 7516.0usft (Original Well Elev)
Well:	Elk Com 34-1H	North Reference:	True
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	EDM 5000.1 Single User Db

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)
4,748.0	0.35	82.21	4,744.4	-15.0	75.8	69.8	0.23	-0.14	-25.92
4,811.0	0.35	78.79	4,807.4	-14.9	76.2	70.2	0.03	0.00	-5.43
4,873.0	0.44	97.87	4,869.4	-14.9	76.6	70.6	0.26	0.15	30.77
4,937.0	0.35	89.94	4,933.4	-15.0	77.1	71.0	0.16	-0.14	-12.39
5,000.0	0.44	103.88	4,996.4	-15.0	77.5	71.4	0.21	0.14	22.13
5,064.0	0.35	100.36	5,060.4	-15.1	77.9	71.8	0.15	-0.14	-5.50
5,127.0	0.44	117.14	5,123.4	-15.3	78.3	72.2	0.23	0.14	26.63
5,190.0	0.35	127.33	5,186.4	-15.5	78.7	72.5	0.18	-0.14	16.17
5,254.0	0.44	119.48	5,250.4	-15.7	79.1	72.8	0.16	0.14	-12.27
5,316.0	0.44	38.27	5,312.4	-15.7	79.4	73.1	0.92	0.00	-130.98
5,379.0	0.26	107.25	5,375.4	-15.5	79.7	73.4	0.67	-0.29	109.49
5,441.0	0.18	97.32	5,437.4	-15.6	80.0	73.7	0.14	-0.13	-16.02
5,504.0	0.18	78.26	5,500.4	-15.6	80.1	73.8	0.09	0.00	-30.25
5,566.0	0.18	103.35	5,562.4	-15.6	80.3	74.0	0.13	0.00	40.47
5,629.0	0.26	69.17	5,625.4	-15.5	80.6	74.3	0.24	0.13	-54.25
5,692.0	0.26	75.93	5,688.4	-15.5	80.8	74.5	0.05	0.00	10.73
5,755.0	0.26	82.62	5,751.4	-15.4	81.1	74.8	0.05	0.00	10.62
5,818.0	0.35	95.63	5,814.4	-15.4	81.5	75.2	0.18	0.14	20.65
5,881.0	0.44	80.05	5,877.4	-15.4	81.9	75.6	0.22	0.14	-24.73
5,944.0	0.35	68.01	5,940.4	-15.3	82.3	76.0	0.19	-0.14	-19.11
6,007.0	0.09	62.90	6,003.4	-15.2	82.5	76.2	0.41	-0.41	-8.11
6,070.0	0.09	134.00	6,066.4	-15.2	82.6	76.3	0.17	0.00	112.86
6,133.0	0.09	132.66	6,129.4	-15.3	82.7	76.4	0.00	0.00	-2.13
6,196.0	0.18	148.11	6,192.4	-15.4	82.8	76.4	0.15	0.14	24.52
6,259.0	0.26	195.12	6,255.4	-15.6	82.8	76.4	0.30	0.13	74.62
6,321.0	0.26	175.40	6,317.4	-15.9	82.8	76.3	0.14	0.00	-31.81
6,384.0	0.26	162.31	6,380.4	-16.1	82.8	76.3	0.09	0.00	-20.78
6,447.0	0.35	200.90	6,443.4	-16.5	82.8	76.2	0.35	0.14	61.25
6,512.0	0.35	150.65	6,508.4	-16.8	82.8	76.1	0.46	0.00	-77.31
6,536.0	1.22	116.42	6,532.4	-17.0	83.1	76.3	3.96	3.62	-142.63
ST2 Departs ST1 @ 3536' MD									
6,543.0	1.49	114.21	6,539.4	-17.1	83.2	76.5	3.96	3.89	-31.56
6,573.0	3.69	107.23	6,569.4	-17.5	84.5	77.6	7.39	7.33	-23.27
6,605.0	5.80	105.30	6,601.2	-18.2	87.0	79.9	6.61	6.59	-6.03
6,636.0	8.71	97.79	6,632.0	-19.0	90.9	83.4	9.85	9.39	-24.23
6,668.0	11.43	93.79	6,663.5	-19.5	96.4	88.7	8.77	8.50	-12.50
6,699.0	13.63	92.04	6,693.8	-19.9	103.2	95.1	7.20	7.10	-5.65
6,731.0	15.65	91.59	6,724.7	-20.1	111.2	102.9	6.32	6.31	-1.41
6,760.0	17.59	90.72	6,752.5	-20.3	119.5	110.9	6.74	6.69	-3.00
6,823.0	20.75	88.35	6,812.0	-20.1	140.2	131.0	5.16	5.02	-3.76
6,886.0	24.18	84.96	6,870.2	-18.6	164.2	154.6	5.82	5.44	-5.38
6,948.0	28.84	81.92	6,925.7	-15.4	191.7	182.0	7.83	7.52	-4.90
7,011.0	33.15	83.38	6,979.7	-11.3	223.9	214.2	6.94	6.84	2.32
7,075.0	37.37	82.58	7,031.9	-6.7	260.5	250.9	6.63	6.59	-1.25



Pathfinder
Survey Report

PATHFINDER
A Schlumberger Company

Company:	Hunt Oil Company	Local Co-ordinate Reference:	Well Elk Com 34-1H
Project:	Rio Arriba County, NM NAD83	TVD Reference:	WELL @ 7516.0usft (Original Well Elev)
Site:	Sec 33 T26N R02W	MD Reference:	WELL @ 7516.0usft (Original Well Elev)
Well:	Elk Com 34-1H	North Reference:	True
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	EDM 5000.1 Single User Db

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)	
7,137.0	43.00	82.94	7,079.3	-1.7	300.2	290.5	9.09	9.08	0.58	
7,200.0	48.45	82.39	7,123.2	4.1	344.9	335.3	8.67	8.65	-0.87	
7,264.0	54.61	80.70	7,163.0	11.5	394.5	385.1	9.84	9.63	-2.64	
7,326.0	60.59	79.82	7,196.2	20.3	446.0	437.3	9.72	9.65	-1.42	
7,390.0	61.82	78.70	7,227.1	30.8	501.1	493.3	2.46	1.92	-1.75	
7,453.0	67.80	80.53	7,253.9	41.0	557.2	550.1	9.85	9.49	2.90	
7,516.0	69.56	81.39	7,276.8	50.2	615.1	608.6	3.07	2.79	1.37	
7,579.0	73.95	82.46	7,296.5	58.6	674.4	668.0	7.15	6.97	1.70	
7,642.0	79.67	81.56	7,310.9	67.2	735.1	729.0	9.19	9.08	-1.43	
7,706.0	83.71	77.49	7,320.1	78.7	797.3	792.2	8.91	6.31	-6.36	
7,738.0	85.82	75.79	7,323.0	86.0	828.3	824.0	8.45	6.59	-5.31	
7,805.0	88.97	75.79	7,326.1	102.5	893.2	890.9	4.70	4.70	0.00	
7"										
7,826.0	89.96	75.79	7,326.3	107.6	913.5	911.9	4.70	4.70	0.00	
7,858.0	90.40	74.93	7,326.2	115.7	944.5	943.9	3.02	1.38	-2.69	
7,890.0	91.10	74.65	7,325.8	124.1	975.4	975.9	2.36	2.19	-0.88	
7,922.0	91.89	74.82	7,324.9	132.5	1,006.2	1,007.9	2.53	2.47	0.53	
7,955.0	91.19	75.05	7,324.0	141.1	1,038.1	1,040.9	2.23	-2.12	0.70	
7,986.0	90.92	74.46	7,323.5	149.3	1,068.0	1,071.9	2.09	-0.87	-1.90	
8,016.0	90.31	74.04	7,323.1	157.4	1,096.9	1,101.9	2.47	-2.03	-1.40	
8,080.0	89.69	72.60	7,323.1	175.8	1,158.2	1,165.8	2.45	-0.97	-2.25	
8,143.0	90.22	71.23	7,323.2	195.3	1,218.1	1,228.7	2.33	0.84	-2.17	
8,207.0	91.19	73.21	7,322.4	214.9	1,279.0	1,292.5	3.44	1.52	3.09	
8,270.0	90.75	74.10	7,321.3	232.6	1,339.4	1,355.5	1.58	-0.70	1.41	
8,334.0	89.87	74.17	7,321.0	250.1	1,401.0	1,419.5	1.38	-1.38	0.11	
8,397.0	88.99	74.43	7,321.6	267.1	1,461.7	1,482.4	1.46	-1.40	0.41	
8,460.0	90.13	74.32	7,322.1	284.1	1,522.3	1,545.4	1.82	1.81	-0.17	
8,523.0	89.25	73.98	7,322.4	301.3	1,582.9	1,608.4	1.50	-1.40	-0.54	
8,587.0	90.40	74.22	7,322.6	318.8	1,644.5	1,672.4	1.84	1.80	0.38	
8,649.0	89.78	73.99	7,322.5	335.8	1,704.1	1,734.3	1.07	-1.00	-0.37	
8,713.0	90.48	74.04	7,322.4	353.4	1,765.6	1,798.3	1.10	1.09	0.08	
8,776.0	89.96	73.35	7,322.2	371.1	1,826.1	1,861.3	1.37	-0.83	-1.10	
8,840.0	89.69	72.57	7,322.3	389.9	1,887.3	1,925.2	1.29	-0.42	-1.22	
8,902.0	89.34	73.10	7,322.9	408.2	1,946.5	1,987.1	1.02	-0.56	0.85	
8,966.0	89.87	73.03	7,323.3	426.8	2,007.7	2,051.0	0.84	0.83	-0.11	
9,030.0	90.75	73.35	7,323.0	445.3	2,069.0	2,115.0	1.46	1.38	0.50	
9,093.0	90.48	75.01	7,322.3	462.5	2,129.6	2,177.9	2.67	-0.43	2.63	
9,157.0	91.80	74.98	7,321.0	479.1	2,191.4	2,241.9	2.06	2.06	-0.05	
9,219.0	90.13	74.40	7,320.0	495.4	2,251.2	2,303.9	2.85	-2.69	-0.94	
9,284.0	89.16	74.54	7,320.4	512.8	2,313.8	2,368.9	1.51	-1.49	0.22	
9,346.0	90.31	74.70	7,320.7	529.3	2,373.6	2,430.9	1.87	1.85	0.26	
9,410.0	89.52	74.31	7,320.8	546.4	2,435.3	2,494.8	1.38	-1.23	-0.61	
9,472.0	89.08	75.23	7,321.5	562.7	2,495.1	2,556.8	1.64	-0.71	1.48	



Pathfinder
Survey Report

PATHFINDER
A Schlumberger Company

Company:	Hunt Oil Company	Local Co-ordinate Reference:	Well Elk Com 34-1H
Project:	Rio Arriba County, NM NAD83	TVD Reference:	WELL @ 7516.0usft (Original Well Elev)
Site:	Sec 33 T26N R02W	MD Reference:	WELL @ 7516.0usft (Original Well Elev)
Well:	Elk Com 34-1H	North Reference:	True
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	EDM 5000.1 Single User Db

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)
9,536.0	89.34	75.34	7,322.4	578.9	2,557.0	2,620.8	0.44	0.41	0.17
9,600.0	89.25	75.18	7,323.2	595.2	2,618.9	2,684.8	0.29	-0.14	-0.25
9,663.0	91.01	73.82	7,323.0	612.0	2,679.6	2,747.8	3.53	2.79	-2.16
9,727.0	90.31	73.58	7,322.3	630.0	2,741.0	2,811.8	1.16	-1.09	-0.38
9,789.0	89.96	73.13	7,322.2	647.8	2,800.4	2,873.7	0.92	-0.56	-0.73
9,852.0	90.66	73.41	7,321.8	665.9	2,860.7	2,936.6	1.20	1.11	0.44
9,915.0	90.66	73.05	7,321.1	684.1	2,921.1	2,999.6	0.57	0.00	-0.57
9,977.0	90.04	73.48	7,320.7	701.9	2,980.4	3,061.5	1.22	-1.00	0.69
10,040.0	89.25	73.85	7,321.1	719.6	3,040.9	3,124.5	1.38	-1.25	0.59
10,104.0	90.13	74.25	7,321.5	737.2	3,102.4	3,188.4	1.51	1.38	0.63
10,168.0	89.25	74.68	7,321.8	754.4	3,164.1	3,252.4	1.53	-1.38	0.67
10,231.0	90.22	74.38	7,322.1	771.2	3,224.8	3,315.4	1.61	1.54	-0.48
10,295.0	89.43	74.43	7,322.3	788.4	3,286.4	3,379.4	1.24	-1.23	0.08
10,358.0	90.48	74.84	7,322.3	805.1	3,347.2	3,442.4	1.79	1.67	0.65
10,421.0	89.25	74.92	7,322.5	821.5	3,408.0	3,505.4	1.96	-1.95	0.13
10,485.0	88.02	75.32	7,324.0	837.9	3,469.8	3,569.3	2.02	-1.92	0.63
10,548.0	88.02	74.46	7,326.2	854.3	3,530.6	3,632.3	1.36	0.00	-1.37
10,612.0	88.90	74.11	7,327.9	871.7	3,592.2	3,696.2	1.48	1.38	-0.55
10,675.0	89.87	73.73	7,328.6	889.1	3,652.7	3,759.2	1.65	1.54	-0.60
10,738.0	90.75	73.64	7,328.2	906.8	3,713.2	3,822.2	1.40	1.40	-0.14
10,801.0	90.66	73.30	7,327.5	924.7	3,773.6	3,885.1	0.56	-0.14	-0.54
10,864.0	89.60	73.44	7,327.3	942.8	3,834.0	3,948.1	1.70	-1.68	0.22
10,928.0	89.78	73.03	7,327.7	961.2	3,895.2	4,012.0	0.70	0.28	-0.64
10,992.0	90.75	73.15	7,327.4	979.9	3,956.5	4,075.9	1.53	1.52	0.19
11,055.0	90.31	73.62	7,326.8	997.9	4,016.8	4,138.9	1.02	-0.70	0.75
11,119.0	88.90	73.38	7,327.2	1,016.0	4,078.2	4,202.8	2.23	-2.20	-0.38
11,182.0	89.87	73.71	7,327.9	1,033.9	4,138.6	4,265.8	1.63	1.54	0.52
11,245.0	90.75	73.78	7,327.6	1,051.5	4,199.1	4,328.7	1.40	1.40	0.11
11,310.0	91.19	73.60	7,326.5	1,069.8	4,261.5	4,393.7	0.73	0.68	-0.28
11,372.0	91.71	74.05	7,324.9	1,087.0	4,321.0	4,455.6	1.11	0.84	0.73
11,435.0	90.66	74.22	7,323.6	1,104.3	4,381.6	4,518.6	1.69	-1.67	0.27
11,499.0	88.55	74.69	7,324.0	1,121.4	4,443.2	4,582.6	3.38	-3.30	0.73
11,562.0	89.34	74.40	7,325.2	1,138.2	4,503.9	4,645.5	1.34	1.25	-0.46
11,588.0	89.87	74.62	7,325.4	1,145.1	4,529.0	4,671.5	2.21	2.04	0.85
11,667.0	89.87	74.62	7,325.6	1,166.1	4,605.2	4,750.5	0.00	0.00	0.00

Straight Line Projection to Bit Depth @ 11667' MD

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
7,805.0	7,326.1	7"	7	8-3/4



Pathfinder
Survey Report

PATHFINDER
A Schlumberger Company

Company:	Hunt Oil Company	Local Co-ordinate Reference:	Well Elk Com 34-1H
Project:	Rio Arriba County, NM NAD83	TVD Reference:	WELL @ 7516.0usft (Original Well Elev)
Site:	Sec 33 T26N R02W	MD Reference:	WELL @ 7516.0usft (Original Well Elev)
Well:	Elk Com 34-1H	North Reference:	True
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,536.0	6,532.4	-17.0	83.1	ST2 Departs ST1 @ 3536' MD
11,667.0	7,325.6	1,166.1	4,605.2	Straight Line Projection to Bit Depth @ 11667' MD

Checked By: _____ Approved By: _____ Date: _____