

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**5. Lease Serial No.
NMNM114350

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
MEDWICK 32 FEDERAL COM 7H9. API Well No.
30-015-42172-00-X110. Field and Pool, or Exploratory
WILDCAT11. County or Parish, and State
EDDY COUNTY, NM

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator
CIMAREX ENERGY COMPANY OF CO

Contact: TERRI STATHEM

E-Mail: tstatthem@cimarex.com

3a. Address
202 S CHEYENNE AVE SUITE 1000
TULSA, OK 74103.43463b. Phone No. (include area code)
Ph: 432-620-1936

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

Sec 32 T26S R27E Lot 2 0290FSL 2050FEL
32.000218 N Lat, 104.123535 W Lon

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

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

13. Describe Proposed or Completed Operation (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.)

Cimarex Energy respectfully request a approval to change the landing point, directional plan and first take point for the Medwick 32 Federal Com #7H well.

A SHL change was approved on 1/20/16 and a revised directional plan was submitted, however, the proposed directional would have stranded acreage on the S2S2 of Sec. 32.

Please see attached revised directional plan and C102 for your review and approval.

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 06 2016

RECEIVED

NSL Required

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

Electronic Submission #349462 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad
Committed to AFMSS for processing by CHARLES NIMMER on 08/30/2016 (16CN0021SE)

Name (Printed/Typed) TERRI STATHEM

Title MANAGER REGULATORY COMPLIANCE

Signature (Electronic Submission)

Date 08/30/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHARLES NIMMER

Title PETROLEUM ENGINEER

Date 08/30/2016

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.

Office Carlsbad

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42172	² Pool Code 98018	³ Pool Name Wildcat; Bone Spring
⁴ Property Code 40451	⁵ Property Name MEDWICK 32 FEDERAL COM	⁶ Well Number 7H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 3192'

¹⁰ Surface Location

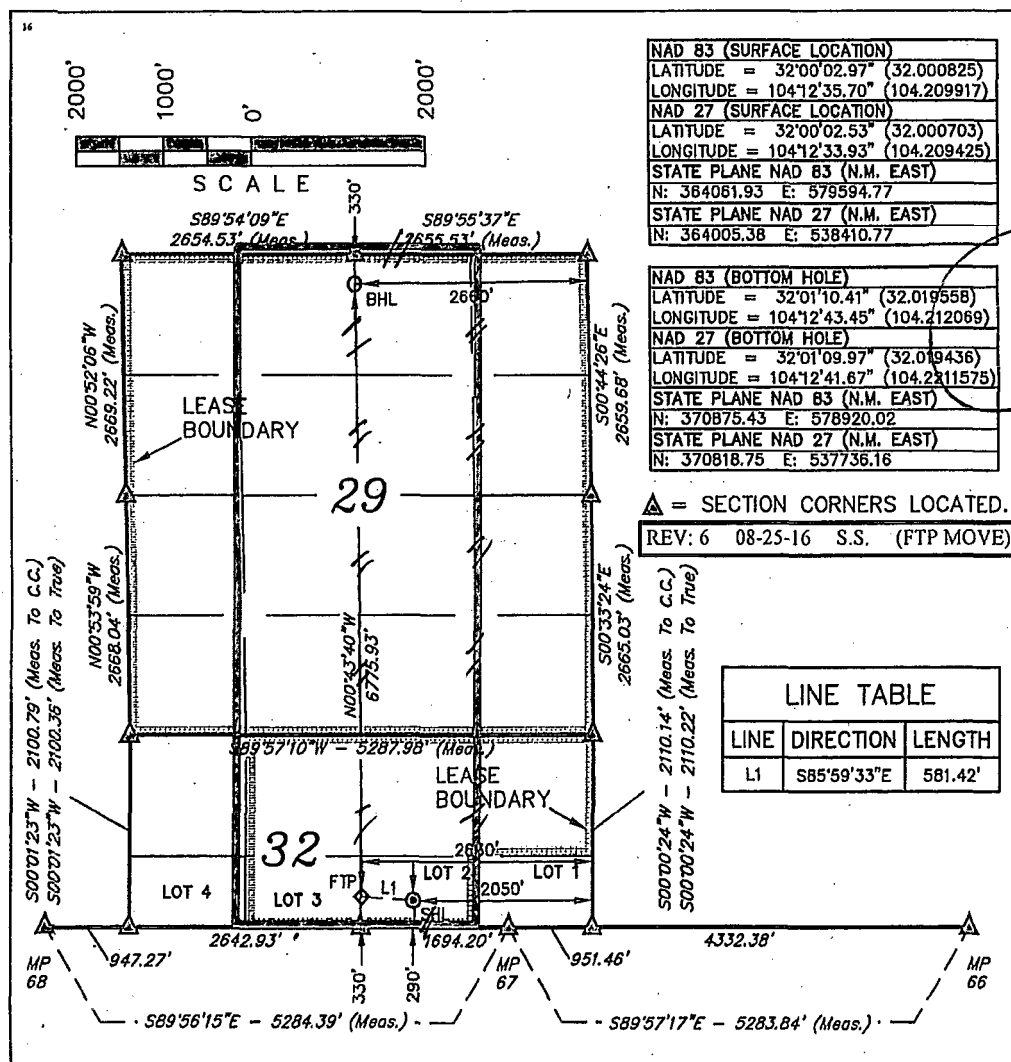
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	32	26S	27E		290	SOUTH	2050	EAST	EDDY

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
C	29	26S	27E		330	NORTH	2660	EAST	EDDY

¹² Dedicated Acres 446.36	¹³ Joint or Infill 223.23	¹⁴ Consolidation Code	¹⁵ Order No. NSL-
---	---	----------------------------------	---------------------------------

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, 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 a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Terri Statham* Date: 8-29-16

Printed Name: Terri Statham

tstatham@Cimarex.com

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.

September 4, 2013

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number:

Schlumberger

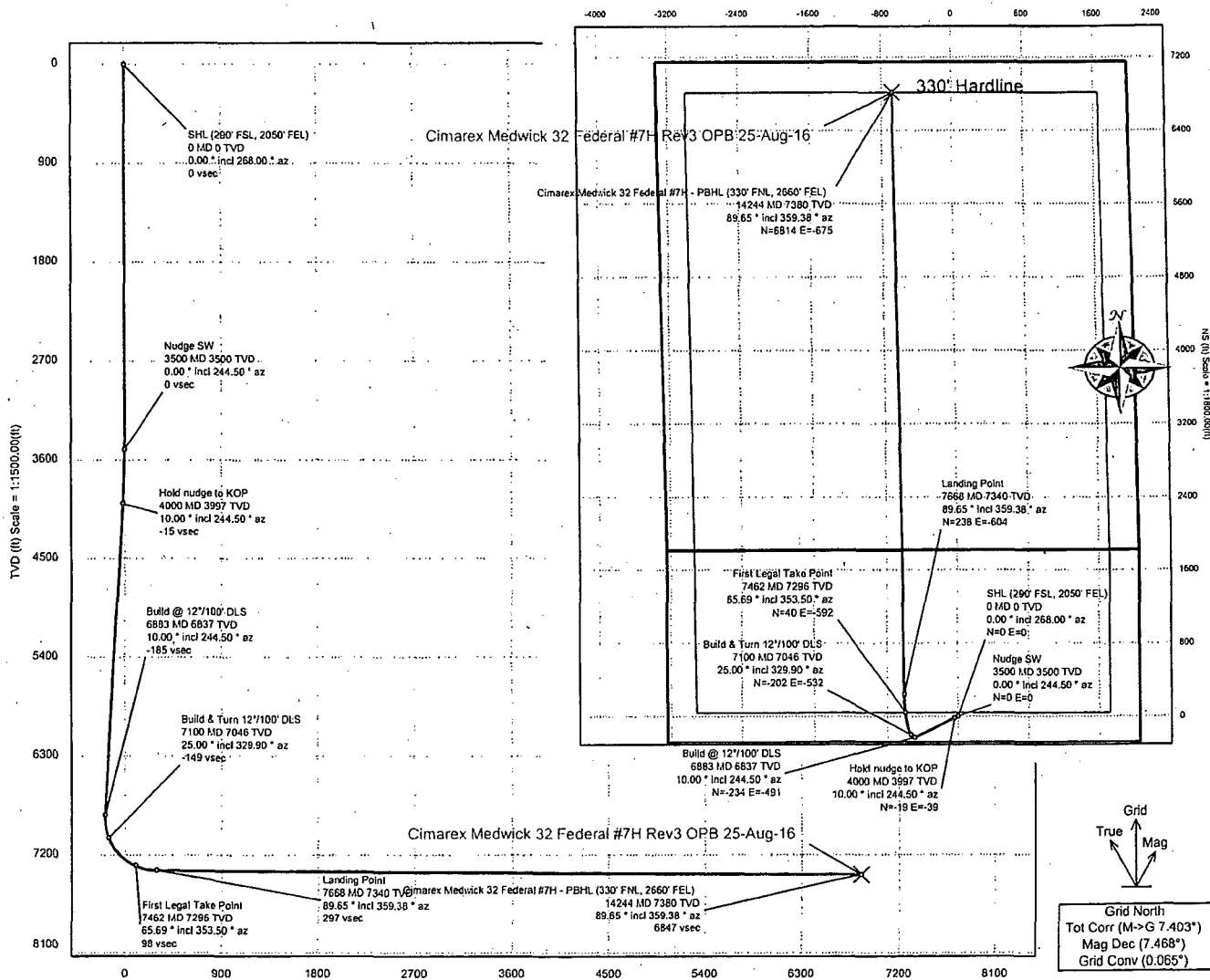
Cimarex



Borehole:	Well:	Field:	Structure:
Original Borehole	Medwick 32 Federal #7H	NM Eddy County (NAD 83)	TBD

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: HDGM 2016 Dip: 59.701° Date: 25-Aug-2016	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Slot: Medwick 32
MagDec: 7.468° FS: 48947.673nT Gravity FS: 998.685mgm (9.80665 Based)	Lat: N 32 0 2.97 Northing: 364061.931NUS Grid Conv: 0.0654°	Federal #7H
	Lon: W 104 12 35.70 Easting: 579594.77NUS Scale Fact: 0.99991077	Plan: Medwick 32 Federal #7H Rev3 OPB 25-Aug-16

EW (ft) Scale = 1:1800.00(1)



Vertical Section (ft) Azim = 354.344° Scale = 1:1500.00(1) Origin = 0N/-S, 0E/-W

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL (290' FSL, 2050' FEL)	0.00	0.00	268.00	0.00	0.00	0.00	0.00	
Nudge SW	3500.00	0.00	244.50	3500.00	0.00	0.00	0.00	0.00
Hold nudge to KOP	4000.00	10.00	244.50	3997.47	-14.77	-18.74	-39.28	2.00
Build @ 12°/100' DLS	6883.23	10.00	244.50	6836.89	-184.73	-234.28	-491.18	0.00
Build & Turn 12°/100' DLS	7100.30	25.00	329.90	7045.75	-148.75	-202.16	-531.90	12.00
First Legal Take Point	7462.34	65.69	353.50	7296.46	97.77	39.64	-591.85	12.00
Landing Point	7667.57	89.65	359.38	7340.00	296.57	238.23	-603.74	12.00
Cimarex Medwick 32 Federal #7H - PBHL (330° FNL, 2660' FEL)	14243.97	89.65	359.38	7380.00	6847.45	6814.12	-674.81	0.00

Cimarex Medwick 32 Federal #7H Rev3 OPB 25-Aug-16 Proposal Report



(Non-Def Plan)

Report Date: August 25, 2016 - 02:34 PM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Cimarex Medwick 32 Federal #7H / Cimarex Medwick 32 Federal #7H
 Well: Cimarex Medwick 32 Federal #7H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Medwick 32 Federal #7H Rev3 OPB 25-Aug-16
 Survey Date: September 25, 2013
 Tort / AHD / DDI / ERD Ratio: 104.125 / 7626.160 ft / 6.185 / 1.033
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 0' 2.97450" W 104° 12' 35.70109"
 Location Grid N/E Y/X: N 364061.930 ftUS, E 579594.770 ftUS
 CRS Grid Convergence Angle: 0.0654°
 Grid Scale Factor: 0.99991077
 Version / Patch: 2.9.370.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 354.344° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: Ground Level
 TVD Reference Elevation: 3192.000 ft above MSL
 Seabed / Ground Elevation: 3192.000 ft above MSL
 Magnetic Declination: 7.468°
 Total Gravity Field Strength: 998.6854mgal (9.80665 Based)
 Gravity Model: DOX
 Total Magnetic Field Strength: 48047.673 nT
 Magnetic Dip Angle: 59.701°
 Declination Date: August 25, 2016
 Magnetic Declination Model: HDGM 2016
 North Reference: Grid North
 Grid Convergence Used: 0.0654°
 Total Corr Mag North->Grid North: 7.4031°
 Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Nothing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL (290' FSL, 2050' FEL)	0.00	0.00	268.00	0.00	0.00	0.00	0.00	N/A	364061.93	579594.77	N 32° 0' 2.97	W 104° 12' 35.70
Nudge SW	3500.00	0.00	244.50	3500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97	W 104° 12' 35.70
Hold nudge to KOP	4000.00	10.00	244.50	3997.47	-14.77	-18.74	-39.28	2.00	364043.19	579555.49	N 32° 0' 2.79	W 104° 12' 36.16
Build @ 12°/100' DLS	6883.23	10.00	244.50	6836.89	-184.73	-234.28	-491.18	0.00	363827.67	579103.64	N 32° 0' 0.66	W 104° 12' 41.41
Build & Turn 12°/100' DLS	7100.30	25.00	329.90	7045.75	-148.75	-202.16	-531.90	12.00	363859.79	579062.92	N 32° 0' 0.98	W 104° 12' 41.88
Landing Point	7667.57	89.65	359.38	7340.00	296.57	238.23	-603.74	12.00	364300.13	578991.08	N 32° 0' 5.34	W 104° 12' 42.71
Cimarex Medwick 32 Federal #7H - PBHL (330' FNL, 2660' FEL)	14243.97	89.65	359.38	7380.00	6847.45	6814.12	-674.81	0.00	370875.43	578920.02	N 32° 1' 10.41	W 104° 12' 43.45

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
 Survey Program:

Comments	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(ftUS)	(ftUS)	(N/S ° ' ")	(E/W ° ' ")
Description	Part	MD From	MD To	EOU Freq	Hole Size	Casing Diameter	Expected Max	Inclination	Survey Tool Type	Borehole / Survey		
		(ft)	(ft)	(ft)	(in)	(in)	(deg)					
	1	0.000	14243.970	.1/100.000	30.000	30.000			SLB_MWD-STD	Original Borehole / Cimarex Medwick 32 Federal #7H Rev3		

Cimarex Medwick 32 Federal #7H Rev3 OPB 25-Aug-16 Proposal Report



(Non-Def Plan)

Report Date: August 25, 2016 - 03:34 PM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Cimarex Medwick 32 Federal #7H / Cimarex Medwick 32 Federal #7H
 Well: Cimarex Medwick 32 Federal #7H
 Borehole: Original Borehole
 UWI / AP#: Unknown / Unknown
 Survey Name: Cimarex Medwick 32 Federal #7H Rev3 OPB 25-Aug-16
 Survey Date: September 25, 2013
 Tori / AHD / DDI / ERD Ratio: 104.125' / 7626.160 ft / 6.185 / 1.033
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 0' 2.97450" W 104° 12' 35.70109"
 Location Grid N/E Y/X: N 364061.930 ftUS, E 579594.770 ftUS
 CRS Grid Convergence Angle: 0.0654°
 Grid Scale Factor: 0.99991077
 Version / Patch: 2.9.370.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 354.344° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: Ground Level
 TVD Reference Elevation: 3192.000 ft above MSL
 Seabed / Ground Elevation: 3192.000 ft above MSL
 Magnetic Declination: 7.468°
 Total Gravity Field Strength: 998.6854mgal (9.80665 Based)
 Gravity Model: DOX
 Total Magnetic Field Strength: 48047.673 nT
 Magnetic Dip Angle: 59.701°
 Declination Date: August 25, 2016
 Magnetic Declination Model: HDGM 2016
 North Reference: Grid North
 Grid Convergence Used: 0.0654°
 Total Corr Mag North->Grid North: 7.4031°
 Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/1000)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
SHL (290' FSL, 2050' FEL)	0.00	0.00	268.00	0.00	0.00	0.00	0.00	N/A	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	100.00	0.00	244.50	100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	200.00	0.00	244.50	200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	300.00	0.00	244.50	300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	400.00	0.00	244.50	400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	500.00	0.00	244.50	500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	600.00	0.00	244.50	600.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	700.00	0.00	244.50	700.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	800.00	0.00	244.50	800.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	900.00	0.00	244.50	900.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1000.00	0.00	244.50	1000.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1100.00	0.00	244.50	1100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1200.00	0.00	244.50	1200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1300.00	0.00	244.50	1300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1400.00	0.00	244.50	1400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1500.00	0.00	244.50	1500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1600.00	0.00	244.50	1600.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1700.00	0.00	244.50	1700.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1800.00	0.00	244.50	1800.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	1900.00	0.00	244.50	1900.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	2000.00	0.00	244.50	2000.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	2100.00	0.00	244.50	2100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	2200.00	0.00	244.50	2200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	2300.00	0.00	244.50	2300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	2400.00	0.00	244.50	2400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"
	2500.00	0.00	244.50	2500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32° 0' 2.97"	W 104° 12' 35.70"

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S...)	Longitude (E/W...)
	2600.00	0.00	244.50	2600.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	2700.00	0.00	244.50	2700.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	2800.00	0.00	244.50	2800.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	2900.00	0.00	244.50	2900.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3000.00	0.00	244.50	3000.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3100.00	0.00	244.50	3100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3200.00	0.00	244.50	3200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3300.00	0.00	244.50	3300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3400.00	0.00	244.50	3400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3500.00	0.00	244.50	3500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32.0 2.97	W 104.12 35.70
	3600.00	2.00	244.50	3599.98	-0.59	-0.75	-1.58	2.00	364061.18	579593.19	N 32.0 2.97	W 104.12 35.72
	3700.00	4.00	244.50	3699.84	-2.37	-3.00	-6.30	2.00	364058.93	579588.47	N 32.0 2.94	W 104.12 35.77
	3800.00	6.00	244.50	3799.45	-5.33	-6.76	-14.16	2.00	364055.17	579580.61	N 32.0 2.91	W 104.12 35.87
	3900.00	8.00	244.50	3898.70	-9.46	-12.00	-25.16	2.00	364049.93	579569.61	N 32.0 2.86	W 104.12 35.99
Nudge SW												
	4000.00	10.00	244.50	3997.47	-14.77	-18.74	-39.28	2.00	364043.19	579555.49	N 32.0 2.79	W 104.12 36.16
Hold nudge to KOP												
	4100.00	10.00	244.50	4095.95	-20.67	-26.21	-54.96	0.00	364035.72	579539.82	N 32.0 2.72	W 104.12 36.34
	4200.00	10.00	244.50	4194.43	-26.56	-33.69	-70.63	0.00	364028.24	579524.15	N 32.0 2.64	W 104.12 36.52
	4300.00	10.00	244.50	4292.91	-32.46	-41.16	-86.30	0.00	364020.77	579508.48	N 32.0 2.57	W 104.12 36.70
	4400.00	10.00	244.50	4391.39	-38.35	-48.64	-101.98	0.00	364013.29	579492.80	N 32.0 2.49	W 104.12 36.89
	4500.00	10.00	244.50	4489.87	-44.25	-56.12	-117.65	0.00	364005.82	579477.13	N 32.0 2.42	W 104.12 37.07
	4600.00	10.00	244.50	4588.35	-50.14	-63.59	-133.32	0.00	363998.34	579461.46	N 32.0 2.35	W 104.12 37.25
	4700.00	10.00	244.50	4686.83	-56.04	-71.07	-149.00	0.00	363990.87	579445.79	N 32.0 2.27	W 104.12 37.43
	4800.00	10.00	244.50	4785.31	-61.93	-78.54	-164.67	0.00	363983.39	579430.12	N 32.0 2.20	W 104.12 37.61
	4900.00	10.00	244.50	4883.79	-67.83	-86.02	-180.34	0.00	363975.92	579414.44	N 32.0 2.13	W 104.12 37.80
	5000.00	10.00	244.50	4982.27	-73.72	-93.49	-196.02	0.00	363968.44	579398.77	N 32.0 2.05	W 104.12 37.98
	5100.00	10.00	244.50	5080.75	-79.62	-100.97	-211.69	0.00	363960.97	579383.10	N 32.0 1.98	W 104.12 38.16
	5200.00	10.00	244.50	5179.23	-85.51	-108.45	-227.36	0.00	363953.49	579367.43	N 32.0 1.90	W 104.12 38.34
	5300.00	10.00	244.50	5277.72	-91.41	-115.92	-243.03	0.00	363946.02	579351.76	N 32.0 1.83	W 104.12 38.52
	5400.00	10.00	244.50	5376.20	-97.30	-123.40	-258.71	0.00	363938.54	579336.09	N 32.0 1.76	W 104.12 38.71
	5500.00	10.00	244.50	5474.68	-103.20	-130.87	-274.38	0.00	363931.07	579320.41	N 32.0 1.68	W 104.12 38.89
	5600.00	10.00	244.50	5573.16	-109.09	-138.35	-290.05	0.00	363923.59	579304.74	N 32.0 1.61	W 104.12 39.07
	5700.00	10.00	244.50	5671.64	-114.99	-145.82	-305.73	0.00	363916.12	579289.07	N 32.0 1.53	W 104.12 39.25
	5800.00	10.00	244.50	5770.12	-120.88	-153.30	-321.40	0.00	363908.64	579273.40	N 32.0 1.46	W 104.12 39.44
	5900.00	10.00	244.50	5868.60	-126.78	-160.78	-337.07	0.00	363901.17	579257.73	N 32.0 1.39	W 104.12 39.62
	6000.00	10.00	244.50	5967.08	-132.67	-168.25	-352.75	0.00	363893.69	579242.05	N 32.0 1.31	W 104.12 39.80
	6100.00	10.00	244.50	6065.56	-138.56	-175.73	-368.42	0.00	363886.22	579226.38	N 32.0 1.24	W 104.12 39.98
	6200.00	10.00	244.50	6164.04	-144.46	-183.20	-384.09	0.00	363878.74	579210.71	N 32.0 1.17	W 104.12 40.16
	6300.00	10.00	244.50	6262.52	-150.35	-190.68	-399.77	0.00	363871.27	579195.04	N 32.0 1.09	W 104.12 40.35
	6400.00	10.00	244.50	6361.00	-156.25	-198.15	-415.44	0.00	363863.79	579179.37	N 32.0 1.02	W 104.12 40.53
	6500.00	10.00	244.50	6459.48	-162.14	-205.63	-431.11	0.00	363856.32	579163.70	N 32.0 0.94	W 104.12 40.71
	6600.00	10.00	244.50	6557.97	-168.04	-213.11	-446.79	0.00	363848.84	579148.02	N 32.0 0.87	W 104.12 40.89
	6700.00	10.00	244.50	6656.45	-173.93	-220.58	-462.46	0.00	363841.37	579132.35	N 32.0 0.80	W 104.12 41.07
	6800.00	10.00	244.50	6754.93	-179.83	-228.06	-478.13	0.00	363833.89	579116.68	N 32.0 0.72	W 104.12 41.25
Build @ 12°/100'												
DLS	6883.23	10.00	244.50	6886.89	-184.73	-234.28	-491.18	0.00	363827.67	579103.64	N 32.0 0.66	W 104.12 41.41
	6900.00	9.63	256.12	6883.42	-185.43	-235.24	-493.85	12.00	363826.71	579100.96	N 32.0 0.65	W 104.12 41.44
	7000.00	14.68	310.97	6951.44	-177.39	-228.92	-511.60	12.00	363833.03	579083.22	N 32.0 0.71	W 104.12 41.48
	7100.00	24.97	329.87	7045.48	-148.87	-202.26	-531.83	12.00	363859.68	579062.99	N 32.0 0.98	W 104.12 41.88
Build & Turn 12°/100' DLS												
	7100.30	25.00	329.90	7045.75	-148.75	-202.16	-531.90	12.00	363859.79	579062.92	N 32.0 0.98	W 104.12 41.88
	7200.00	35.67	340.77	7131.74	-101.14	-156.31	-552.11	12.00	363905.63	579042.71	N 32.0 1.43	W 104.12 42.11
	7300.00	46.95	347.05	7206.77	-36.32	-92.94	-569.97	12.00	363869.00	579024.85	N 32.0 2.06	W 104.12 42.32
	7400.00	58.46	351.34	7267.28	42.76	-14.92	-584.63	12.00	364047.01	579010.20	N 32.0 2.83	W 104.12 42.49
First Legal Take Point												
	7462.34	65.69	353.50	7296.46	97.77	39.64	-591.85	12.00	364101.56	579002.97	N 32.0 3.37	W 104.12 42.57
	7500.00	70.08	354.68	7310.64	132.65	74.33	-595.44	12.00	364136.26	578999.38	N 32.0 3.72	W 104.12 42.61
	7600.00	81.75	357.55	7334.94	229.42	170.93	-601.94	12.00	364232.84	578992.88	N 32.0 4.67	W 104.12 42.69

Comments	MD (ft)	Incl (°)	Azim Grd (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°100ft)	Northng (ftUS)	Eastng (ftUS)	Latitude (N/S °.')	Longitude (E/W °.')
Landing Point	7667.57	89.65	359.38	7340.00	296.57	238.33	-603.74	12.00	364300.13	578991.08	N 32 0 5.34	W 104 12 42.71
	7700.00	89.65	359.38	7340.20	328.87	270.65	-604.09	0.00	364332.56	578990.73	N 32 0 5.66	W 104 12 42.71
	7800.00	89.65	359.38	7340.81	428.48	370.65	-605.18	0.00	364432.54	578988.65	N 32 0 6.65	W 104 12 42.72
	7900.00	89.65	359.38	7341.42	528.09	470.64	-606.26	0.00	364532.53	578988.56	N 32 0 7.64	W 104 12 42.74
	8000.00	89.65	359.38	7342.03	627.71	570.63	-607.35	0.00	364632.51	578987.48	N 32 0 8.63	W 104 12 42.75
	8100.00	89.65	359.38	7342.64	727.32	670.62	-608.43	0.00	364732.49	578986.40	N 32 0 9.62	W 104 12 42.76
	8200.00	89.65	359.38	7343.25	826.93	770.62	-609.51	0.00	364832.48	578985.31	N 32 0 10.61	W 104 12 42.77
	8300.00	89.65	359.38	7343.86	926.54	870.61	-610.59	0.00	364932.46	578984.23	N 32 0 11.60	W 104 12 42.78
	8400.00	89.65	359.38	7344.47	1026.16	970.60	-611.68	0.00	365032.44	578983.15	N 32 0 12.59	W 104 12 42.79
	8500.00	89.65	359.38	7345.08	1125.77	1070.59	-612.76	0.00	365132.43	578982.06	N 32 0 13.58	W 104 12 42.80
	8600.00	89.65	359.38	7345.69	1225.38	1170.58	-613.84	0.00	365232.41	578980.98	N 32 0 14.56	W 104 12 42.81
	8700.00	89.65	359.38	7346.30	1324.99	1270.58	-614.93	0.00	365332.39	578979.90	N 32 0 15.55	W 104 12 42.83
	8800.00	89.65	359.38	7346.91	1424.61	1370.57	-616.01	0.00	365432.37	578978.82	N 32 0 16.54	W 104 12 42.84
	8900.00	89.65	359.38	7347.52	1524.22	1470.56	-617.09	0.00	365532.36	578977.73	N 32 0 17.53	W 104 12 42.85
	9000.00	89.65	359.38	7348.13	1623.83	1570.55	-618.17	0.00	365632.34	578976.65	N 32 0 18.52	W 104 12 42.86
	9100.00	89.65	359.38	7348.74	1723.44	1670.55	-619.26	0.00	365732.32	578975.57	N 32 0 19.51	W 104 12 42.87
	9200.00	89.65	359.38	7349.35	1823.05	1770.54	-620.34	0.00	365832.31	578974.49	N 32 0 20.50	W 104 12 42.88
	9300.00	89.65	359.38	7349.96	1922.67	1870.53	-621.42	0.00	365932.29	578973.40	N 32 0 21.49	W 104 12 42.89
	9400.00	89.65	359.38	7350.57	2022.28	1970.52	-622.50	0.00	366032.27	578972.32	N 32 0 22.48	W 104 12 42.90
	9500.00	89.65	359.38	7351.18	2121.89	2070.52	-623.59	0.00	366132.26	578971.24	N 32 0 23.47	W 104 12 42.92
	9600.00	89.65	359.38	7351.79	2221.50	2170.51	-624.67	0.00	366232.24	578970.16	N 32 0 24.46	W 104 12 42.93
	9700.00	89.65	359.38	7352.40	2321.11	2270.50	-625.75	0.00	366332.22	578969.08	N 32 0 25.45	W 104 12 42.94
	9800.00	89.65	359.38	7353.01	2420.73	2370.49	-626.83	0.00	366432.21	578968.00	N 32 0 26.44	W 104 12 42.95
	9900.00	89.65	359.38	7353.62	2520.34	2470.48	-627.91	0.00	366532.19	578966.91	N 32 0 27.43	W 104 12 42.96
	10000.00	89.65	359.38	7354.23	2619.95	2570.48	-628.99	0.00	366632.17	578965.83	N 32 0 28.42	W 104 12 42.97
	10100.00	89.65	359.38	7354.84	2719.56	2670.47	-630.08	0.00	366732.16	578964.75	N 32 0 29.41	W 104 12 42.98
	10200.00	89.65	359.38	7355.45	2819.18	2770.46	-631.16	0.00	366832.14	578963.67	N 32 0 30.40	W 104 12 42.99
	10300.00	89.65	359.38	7356.05	2918.79	2870.45	-632.24	0.00	366932.12	578962.59	N 32 0 31.39	W 104 12 43.01
	10400.00	89.65	359.38	7356.67	3018.40	2970.45	-633.32	0.00	367032.11	578961.51	N 32 0 32.38	W 104 12 43.02
	10500.00	89.65	359.38	7357.27	3118.01	3070.44	-634.40	0.00	367132.09	578960.43	N 32 0 33.37	W 104 12 43.03
	10600.00	89.65	359.38	7357.88	3217.62	3170.43	-635.48	0.00	367232.07	578959.35	N 32 0 34.35	W 104 12 43.04
	10700.00	89.65	359.38	7358.49	3317.24	3270.42	-636.56	0.00	367332.05	578958.26	N 32 0 35.34	W 104 12 43.05
	10800.00	89.65	359.38	7359.10	3416.85	3370.42	-637.64	0.00	367432.04	578957.18	N 32 0 36.33	W 104 12 43.06
	10900.00	89.65	359.38	7359.71	3516.46	3470.41	-638.73	0.00	367532.02	578956.10	N 32 0 37.32	W 104 12 43.07
	11000.00	89.65	359.38	7360.32	3616.07	3570.40	-639.81	0.00	367632.00	578955.02	N 32 0 38.31	W 104 12 43.08
	11100.00	89.65	359.38	7360.92	3715.68	3670.39	-640.89	0.00	367731.99	578953.94	N 32 0 39.30	W 104 12 43.10
	11200.00	89.65	359.38	7361.53	3815.30	3770.38	-641.97	0.00	367831.97	578952.86	N 32 0 40.29	W 104 12 43.11
	11300.00	89.65	359.38	7362.14	3914.91	3870.37	-643.05	0.00	367931.95	578951.78	N 32 0 41.28	W 104 12 43.12
	11400.00	89.65	359.38	7362.75	4014.52	3970.37	-644.13	0.00	368031.94	578950.70	N 32 0 42.27	W 104 12 43.13
	11500.00	89.65	359.38	7363.35	4114.13	4070.36	-645.21	0.00	368131.92	578949.62	N 32 0 43.26	W 104 12 43.14
	11600.00	89.65	359.38	7363.96	4213.74	4170.35	-646.29	0.00	368231.90	578948.54	N 32 0 44.25	W 104 12 43.15
	11700.00	89.65	359.38	7364.57	4313.36	4270.35	-647.37	0.00	368331.89	578947.46	N 32 0 45.24	W 104 12 43.16
	11800.00	89.65	359.38	7365.18	4412.97	4370.34	-648.45	0.00	368431.87	578946.38	N 32 0 46.23	W 104 12 43.17
	11900.00	89.65	359.38	7365.78	4512.58	4470.33	-649.53	0.00	368531.85	578945.30	N 32 0 47.22	W 104 12 43.19
	12000.00	89.65	359.38	7366.39	4612.19	4570.32	-650.61	0.00	368631.84	578944.22	N 32 0 48.21	W 104 12 43.20
	12100.00	89.65	359.38	7366.99	4711.80	4670.32	-651.69	0.00	368731.82	578943.14	N 32 0 49.20	W 104 12 43.21
	12200.00	89.65	359.38	7367.60	4811.42	4770.31	-652.77	0.00	368831.80	578942.06	N 32 0 50.19	W 104 12 43.22
	12300.00	89.65	359.38	7368.21	4911.03	4870.30	-653.85	0.00	368931.79	578940.98	N 32 0 51.18	W 104 12 43.23
	12400.00	89.65	359.38	7368.82	5010.64	4970.29	-654.93	0.00	369031.77	578939.90	N 32 0 52.17	W 104 12 43.24
	12500.00	89.65	359.38	7369.43	5110.25	5070.28	-656.00	0.00	369131.75	578938.83	N 32 0 53.15	W 104 12 43.25
	12600.00	89.65	359.38	7370.03	5209.86	5170.28	-657.08	0.00	369231.74	578937.75	N 32 0 54.14	W 104 12 43.26
	12700.00	89.65	359.38	7370.64	5309.48	5270.27	-658.16	0.00	369331.72	578936.67	N 32 0 55.13	W 104 12 43.28
	12800.00	89.65	359.38	7371.25	5409.09	5370.26	-659.24	0.00	369431.70	578935.59	N 32 0 56.12	W 104 12 43.29
	12900.00	89.65	359.38	7371.85	5508.70	5470.25	-660.32	0.00	369531.69	578934.51	N 32 0 57.11	W 104 12 43.30
	13000.00	89.65	359.38	7372.46	5608.31	5570.25	-661.40	0.00	369631.67	578933.43	N 32 0 58.10	W 104 12 43.31
	13100.00	89.65	359.38	7373.07	5707.92	5670.24	-662.48	0.00	369731.65	578932.35	N 32 0 59.09	W 104 12 43.32
	13200.00	89.65	359.38	7373.67	5807.54	5770.23	-663.56	0.00	369831.63	578931.27	N 32 1 0.08	W 104 12 43.33
	13300.00	89.65	359.38	7374.28	5907.15	5870.22	-664.64	0.00	369931.62	578930.20	N 32 1 1.07	W 104 12 43.34

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
Cimarex Medwick 32 Federal #7H - PBHL (330' FNL, 2660' FEL)	13400.00	89.65	359.38	7374.89	6006.76	5970.22	-665.71	0.00	370031.60	578929.12	N 32 1 2.06	W 104 12 43.35
	13500.00	89.65	359.38	7375.49	6106.37	6070.21	-666.79	0.00	370131.58	578928.04	N 32 1 3.05	W 104 12 43.37
	13600.00	89.65	359.38	7376.10	6205.98	6170.20	-667.87	0.00	370231.57	578926.96	N 32 1 4.04	W 104 12 43.38
	13700.00	89.65	359.38	7376.70	6305.60	6270.19	-668.95	0.00	370331.55	578925.88	N 32 1 5.03	W 104 12 43.39
	13800.00	89.65	359.38	7377.31	6405.21	6370.19	-670.03	0.00	370431.53	578924.80	N 32 1 6.02	W 104 12 43.40
	13900.00	89.65	359.38	7377.92	6504.82	6470.18	-671.10	0.00	370531.52	578923.73	N 32 1 7.01	W 104 12 43.41
	14000.00	89.65	359.38	7378.52	6604.43	6570.17	-672.18	0.00	370631.50	578922.65	N 32 1 8.00	W 104 12 43.42
	14100.00	89.65	359.38	7379.13	6704.04	6670.16	-673.26	0.00	370731.48	578921.57	N 32 1 8.99	W 104 12 43.43
	14200.00	89.65	359.38	7379.73	6803.65	6770.15	-674.34	0.00	370831.47	578920.49	N 32 1 9.98	W 104 12 43.44
	14243.97	89.65	359.38	7380.00	6847.45	6814.12	-674.81	0.00	370875.43	578920.02	N 32 1 10.41	W 104 12 43.45

Survey Type:

Non-Def Plan

Survey Error Model:
Survey Program:

ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Description	Part	MD From (ft)	MD To (ft)	ECU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	14243.970	1/100.000	30.000	30.000		SLB_MWD-STD	Original Borehole / Cimarex Medwick 32 Federal #7H Rev3